"Sowing the seeds"

The use of Feedback in postgraduate medical education:

A key factor in developing and enhancing clinical competence

By

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DECLARATION

I, Chauntelle Ingrid Bagwandeen, declare as follows:

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SUPERVISOR'S DECLARATION

I, Dr VS Singaram, hereby confirm that I have read the contents of this dissertation and approve its submission.

Signed:…………………………………

Date: 15 December 2016

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ACRONYMS

CMSA   Colleges of Medicine of South Africa

DoH   Department of Health

EFL   English First Language Speakers

ESL   English Second Language Speakers

NRMSM   Nelson R. Mandela School of Medicine

PGCTL   Postgraduate Committee for Teaching and Learning

UGCTL   Undergraduate Committee for Teaching and Learning

UK   United Kingdom

UKZN   University of KwaZulu-Natal

LIST OF PUBLICATIONS

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ABSTRACT

Background: The importance of feedback in enhancing clinical competency in the postgraduate medical education arena is well documented. Many definitions of, and models and frameworks for delivering feedback exist. Trainee specialists must learn how to use the feedback that they receive to hone their knowledge, skills and professional performance. Clinical supervisors must be equally effective in delivering the best feedback possible in all spheres of the training platform so as to impact positively on performance. However, while many studies have explored how feedback is given and received in postgraduate medical education, these studies have been conducted in homogenous settings.

Aim: This study set out to examine how contextual and demographic factors affect the provision of feedback in a clinical training environment with heterogeneous demographics. This study aimed to investigate the perceptions of the registrars, consultants and Clinical Training Heads regarding the quality and factors that influence the process of giving and receiving feedback, so as to make recommendations for improvement and to develop policy guidelines for the enhancement of postgraduate clinical speciality training in diverse clinical training environments.

Methods: A mixed methods approach was adopted for this study. Qualitative and quantitative analysis was done regarding the perceptions of the quality of the current delivery of feedback across six disciplines at a teaching hospital. Consultants and registrars consented to complete a questionnaire consisting of open- and close-ended questions to determine the quality, quantity, type and timing of feedback. Responses were coded on a five-point Likert Scale and combined to give an overall positive or negative response. The relationship between demographic factors such as age, race, gender, home language and discipline of study were also evaluated, with responses to open-ended questions used to extend and enrich the quantitative data. Descriptive statistics were used to analyse the data. Differences between groups were calculated using Pearson's Chi Square test for independent variables, with a p–value of < 0.05 regarded as being statistically significant. Semi-structured interviews were conducted with the Clinical Training Heads to explore their feedback regarding the feedback received about feedback from the consultants and registrars. The Walt and Gilson (1994) triangular framework for

policy analysis was used to explore the perceptions of current practice of the Clinical Training Heads of six major disciplines. A thematic analysis was conducted of their perceptions of how feedback was currently given and received by consultants and registers, with a view to developing policy guidelines to improve the practise of giving and receiving feedback.

Results: The results revealed a disparity in the perceptions of consultants and registrars regarding current practise. Although consultants believed that they provided adequate feedback, registrars disagreed, citing an overall dissatisfaction with the process. Registrars believed that consultants lacked training in how to give feedback , and that important elements such as prior provision of the standards to be obtained, as well as feedback being based on directly observed performance were missing. Consultants concurred that they lacked capacity in how to give adequate feedback, but felt that heavy workloads, fear of negative reactions and the apathy of registrars as well as their failure to act on feedback when given, hampered the process. Male consultants and registrars both reported better experiences of giving and receiving feedback overall. Registrars who were English second language speakers had statistically significantly more favourable outcomes with feedback compared to English first language speakers. The Clinical Training Heads reported that lack of appropriate institutional support and an overall guiding framework, combined with multiple administrative bodies of registrars as well as language barriers, were challenges to be overcome. They identified areas for future improvement, including standardisation of the process, more effective use of logbooks and better monitoring and evaluation.

Conclusion: Registrars and consultants agreed that feedback was essential to ensuring that clinical competencies were achieved. However, ongoing in-service education and training of consultants and registrars was necessary to ensure that consultants were fully capacitated to provide constant, high quality feedback and that registrars were able to recognise feedback when it was given. Feedback needs to be an integral part of the culture of the university teaching and learning ethos. To this end, policy guidelines incorporating elements of identified 'Best Practices' on how to give feedback were developed and recommended for implementation under the auspices of an overarching Postgraduate Committee for Teaching and Learning.

CHAPTER 1: INTRODUCTION –
"THERE IS NO FAILURE, ONLY FEEDBACK"

In this chapter, the concept of feedback is discussed. The importance of feedback as an essential tool in enhancing clinical competencies in postgraduate medical training is highlighted. The historical development of feedback, the different models and essential elements of feedback are elaborated upon, as well as the challenges to providing feedback in the postgraduate clinical training platform. This is followed by the rationale for the study and the aim and objectives of the overall study.

1.1 Introduction

Meaningful feedback from consultants, or senior hospital-based physicians who have completed their specialist training to registrars - doctors undergoing training to become a specialist - has come to be recognised as an integral component of effective clinical teaching in postgraduate medical education (Telio, Ajjawi and Regehr 2015, McQueen et al. 2016). But what is feedback? A plethora of different definitions exist, with the colloquial common understanding to be simply timely comment on students' work (Boud and Molloy 2013a). This may account for the differences in understanding, and difficulties in implementation and provision of good feedback. In Ende's (1983) landmark paper, feedback in postgraduate medical education is defined as "information describing students' or houseofficers' performance in a given activity" (Ende 1983 p777). Hattie and Timperley (2007 p81) further define feedback as "a 'consequence' of performance", resulting from the information about a specific task or process of learning provided by an agent – be it a book, parent or teacher – being acted upon within a specific context. In a meta-analysis representing 20–30 million students and taking over a hundred factors into account, feedback was seen to be most powerful when students received information about how to do a task more effectively, rather than just receiving compliments or threats of punitive measures, as well as when goals are specific and challenging. Archer defined feedback as "information about previous performance (which) is used to promote positive and desirable development" (Archer 2010 p101). It has also been considered to be "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 p189). The goal of the feedback process is "to identify and convey the strengths and weaknesses of the learner's performance, not of the learner, in a constructive process designed to achieve on-going elevation in the learner's practise" (DeLima Thomas and Arnold 2011 p238).

Boud and Molloy (2013b) feel that these definitions of feedback, that they term 'Feedback Mark 1', might be too limited in their approach. The assumption with these definitions is that an absolute requirement is for the supervisors to point out what is erroneous to the student and provide the necessary corrective mechanisms to improve performance. They therefore propose a definition of 'Feedback Mark 2', making the student the centre of the

process. Hence they move away from the construct that by novices passively receiving information, performance will be improved, and instead focus on students' reflections on the standards to be achieved, and what work must be done to achieve these. They define feedback as a process whereby, "learners obtain information about their work in order to appreciate the similarities and differences between the appropriate standards for any given work, and the qualities of the work itself, in order to generate improved work" (Boud and Molloy 2013a p6). This stance is supported by Murdoch-Eaton and Sargeant (2012) who posit that credible feedback should first encourage reflection about the feedback, which in turn should encourage behaviour change to improve performance. For the purpose of this study, a definition of feedback has been synthesised from the literature to be "a process whereby the desired standard of proficiency in a task has been clearly established. This standard has been communicated to the student. Gaps in performing the task or level of knowledge are identified, based on actual observation of the student, and the student made aware of his or her shortcomings, together with a plan to improve performance."

1.2 What is the importance of feedback?

Training to become a doctor is almost like serving an old-fashioned apprenticeship (DeLima Thomas and Arnold 2011), with the transfer of skills from an experienced senior to an inexperienced novice occurring within the clinical setting. This setting is particularly conducive to appropriate feedback resulting in competent trainees, since the mode of instruction is experiential learning (Fluit et al. 2012). This is a highly authentic means of assessing performance and providing timeous feedback at the patient's bedside or shortly thereafter – a form of brief feedback that forms part of the spectrum of types of feedback (Nottingham and Henning 2010). Various models have been proposed for this skills transfer, the end purpose of which is to develop and hone competencies in the novice that will translate into high quality care of patients with optimal outcomes. These range from the traditional 'time-spent' – where a historically prescribed amount of time is spent in the discipline, ostensibly to allow the individual to imbibe the competencies, as if by osmosis (McQueen et al. 2016), to a more modern version resulting in the production of an 'i-Doc' – a physician adequately equipped to react to different demands as a result of exposures during training (Hodges 2010). Although this learning process

may occur spontaneously, the process should be enhanced through appropriate feedback – a formalised assessment of performance, with a corrective plan of action to address deficiencies – a 'learning through guiding' process (Bing-You and Trowbridge 2009, Fluit et al. 2012). In this way, the trainee receives clarification on his or her actions compared to what should have been done, on how to address the gap between actual and intended performance, and most importantly, what the consequences are for patient outcomes should the current performance go unchecked. Ideally, this should then prompt a behaviour change within the trainee to achieve the desired standard (Ende 1983).

As training progresses from undergraduate training to postgraduate specialisation, the need intensifies for constant, high-quality feedback from mentors to students to aid in the development of competencies of the trainee, as it is through the provision of feedback that strengths may be identified and amplified, and corrective measures may be put in place to overcome deficiencies (Hattie and Timperley 2007, Ramani and Krackov 2012, Shrivastava, Shrivastava and Ramasamy 2014, Zehra 2015, McQueen et al. 2016). Further, medical education should be an ongoing and continuous process of lifelong learning, and so even after graduation and specialisation, practising (i.e. licensed) physicians also benefit from feedback regarding performance. While this process may be in the form of attendance at conferences and workshops, electronic updates, record reviews etc., early introduction of feedback comprising all required elements and delivered in the appropriate setting and context, and at the correct time should ideally foster this process of love of continuous learning together with the skill of self-reflection (Sargeant et al. 2006, Wittich et al. 2011, Rogers et al. 2012). Feedback within the training process, thus serves a double-duty, that of improving practice now, but also to increase competence for future practice, by enhancing self-regulation and monitoring. In addition, the skill to recognise and utilise multiple resources for learning even after specialisation, is increased (Boud and Molloy 2013a). This process is also helpful in encouraging the development of self-authorship in postgraduate students. In this way, students or registrars may be capacitated to develop a cognitive maturity that challenges the way they view themselves in the context of their experiences, and encourages them to take greater responsibility for their own learning (Sandars and Jackson 2015) to enhance their clinical competence and performance.

1.3 Models, Guidelines and Principles for delivery of feedback

George E. Miller (1990) devised a pyramidal representation of the transitional process necessary in acquiring the skills and knowledge to develop competence and clinical competence (Figure 1). In this model, a student knows (knowledge), then knows how (competence), then shows how (performance), and finally does (action). Inherent to the understanding of the model, and a major impact on assessment of competence is the distinction between competence (what the student is capable of), and performance (what the student does). It is in this area of crucial clinical encounters where competence and performance need to meet optimally to produce the required clinical competence that is critical to patient outcomes, and where feedback from consultant to registrar is most beneficial.
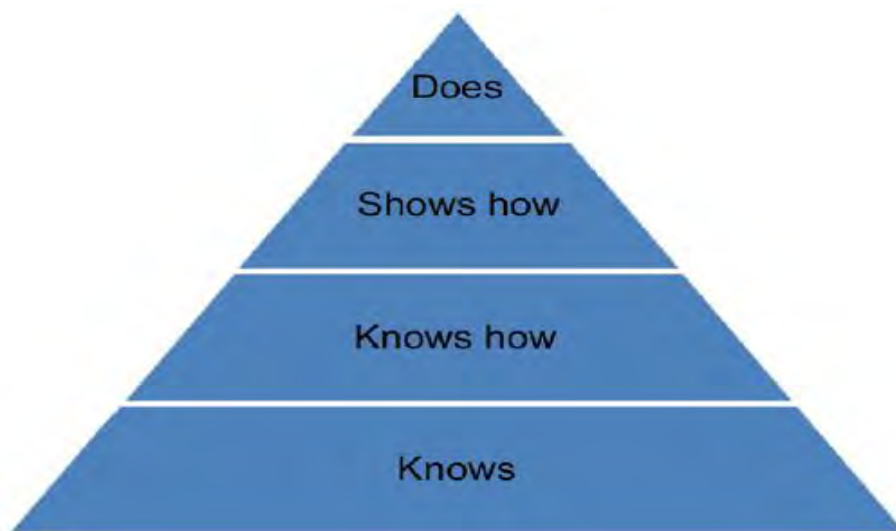
Figure 1: Miller's pyramid for assessing clinical competence. Source: Miller (1990 S63)

Supervisors and students need to be skilled in the art of giving and receiving feedback. A proper approach to feedback is essential, in order to ensure that the process attains the desired end result of improving performance. Various models, guidelines and principles have been proposed in order to successfully provide feedback to novices, outlining the key steps that should be in place. Ende (1983) adapted principles common to personnel management, group dynamics and education for use in medical education – namely that the supervisor should work as an ally of the student, that the feedback should be expected, with the timing and place agreed upon beforehand, based on first-hand observation of

specific behaviour, decisions and actions, not interpretation of the student's motives nor general performance, using well-defined and mutually agreed upon goals as the measure of performance. The student should be asked to assess him or herself first, as well as be asked for an assessment of the supervisor's performance. Language should be non-evaluative and non-judgmental. The rationale for this was to prevent failure due to embarrassment, anger or defensiveness of the trainee, or reluctance to initiate the process by the supervisor due to fear of causing offence.

DeLima Thomas and Arnold (2011), in comparing the giving of feedback to that of breaking bad news, emphasise the importance of the supervisor being fully cognisant of the standards against which performance will be assessed, as well as how these apply to learners at different levels. In this way, clarity is achieved regarding the level at which the trainee is expected to perform so that underperformance may be corrected, and excellence commended and entrenched. They emphasise the value of having a balanced relationship between supervisor and student, pointing out the difficulties in giving feedback when no relationship exists, as compared to the quandary that arises when a close relationship makes it difficult to give honest feedback that may be negative.

Giving good feedback has also been compared to a 'sandwich' (Milan, Parish and Reichgott 2006). The top 'slice of bread' is a positive opening comment about something the student has done well, the filling equates to the plan for improvement, and then the sandwich is completed with another positive comment. However, they go on to suggest that feedback should move beyond this approach to one which focusses on creating a supportive, mutually trusting environment that accounts for the receptivity of the recipient to the proposed change. This so-called 'PEARLS' model focusses on partnership, empathy, apology, respect, legitimacy and support (Milan et al. 2006, Shrivastava et al. 2014). Pendleton et al. (2003) advocated a step-wise approach in which the novice comments on what was good about the observed performance, followed by the supervisors' agreement and elaboration. The novice then states what was poor and how it could be improved, followed by the supervisors' comments regarding performance and the students' improvement plan.

Ramani and Krackov (2012) and Cantillon and Sargeant (2008) provide guidelines on how to give feedback, focussing on the need for bilateral, non-emotive communication around performance in line with pre-determined standards to be achieved. They stress that the recipient must confirm that they have clarity on the feedback given, and both participants should reflect on the process thereafter.

The setting, type and timing of feedback is also important – is it appropriate to give in-depth feedback in the middle of a busy ward in the hubbub of a clinical intake? Branch and Paranjape (2002) proposed that brief feedback to an intern or student would be appropriate in this setting. However, more formal and major feedback to a registrar regarding a portfolio of competencies achieved (Jenkins, Mash and Derese 2013) requires scheduled appointments in a private setting. While immediate feedback is beneficial for developing skills in procedures, delaying feedback may be better for improving knowledge for more difficult tasks, and in smaller 'bite-sized' pieces of information, drawing the distinction between what has been achieved and how to achieve what is to be expected, while providing the appropriate motivation – a process known as scaffolding (Archer 2010). Archer differentiates between directive feedback, where only what is erroneous is highlighted, versus facilitative feedback, in which corrective measures to improve performance are also part of the process. He notes that feedback may be drawn from various sources and be presented in an oral, written or numerical format, although ideally should be discussed one on one. Archer concludes that for feedback to be effective – indeed to prevent the unwanted long-lasting effect of 'paralysis' from perceived negative feedback – a culture of feedback that is an on-going process and incorporates self-assessment and reflection that will aid life-long learning should be encouraged. DeLima Thomas and Arnold (2011) highlight the need for feedback soon after the observed task so as to prevent 'dilution' of the feedback and so that the trainee's emotional responses to the process as a whole is not ignored and may aid in the development of an action plan.

Van de Ridder et al. (2008) list nine characteristics of feedback, namely content, aim, recipient, form, preparation, source of the information, provider communication conditions and contextual factors, which is in keeping with the concepts already mooted

by other authors. They note that three concepts are predominant: feedback to provide a message, interactive feedback or reaction, which comprises information delivery and reception (hence the importance of ensuring the feedback is clear and precise enough to be delivered without distortion so that the message is received and understood 'loud and clear') and finally that feedback is also a cycle in which transmission and reception of information should include a response e.g. improvement in performance. They identify ten key elements of feedback in medical education, building on the general characteristics identified previously. For feedback to be 'strong' rather than 'weak', these elements – tasks that are observable rather than unobservable, expert versus uninformed observers, highly specific information rather than general information that is compared with a pre-determined standard and personally observed – must be integral to the feedback process. McKinley, Williams and Stephenson (2010) expand on van de Ridder et al's list to state explicitly that in order to improve on the content of feedback, the elements of mutual agreement on the purpose of the feedback, the acceptability of the feedback to the recipient and the usefulness of the content of the feedback have to be understood. Hence it is critical for clinical training centres to have a model, guideline or policy in place for registrars and consultants to facilitate effective clinical teaching in postgraduate medical education settings.

1.4 Barriers to giving good feedback

Given then that the concept of feedback is regarded as an essential component of postgraduate medical education (Archer 2010, Anderson 2012, Ramani and Krackov 2012, Shrivastava et al. 2014, Telio et al. 2015) and that there appears to be consensus about what the elements of feedback should comprise, why are certain areas of concern highlighted so frequently in the literature as gaps that require further study? These include inadequacy of feedback, dissatisfaction with the process, training needs in feedback and responses to feedback to name a few. Many evaluations persistently reveal students' dissatisfaction with the amount and type of feedback they receive in their clinical and postgraduate training, as they perceive it to be inadequate, inappropriate or completely absent (Busari et al. 2005, Sender Liberman et al. 2005, Anderson 2012, Jensen 2012 et al., Boud and Molloy 2013a, Boud and Molloy 2013b, Boud 2015, Telio et al. 2015).

Perhaps the central flaw stems from the paradigms from which the definitions of feedback were drawn and the tenets underlying its implementation (Boud and Molloy 2013b, Telio et al. 2015). Although the use of feedback dates back to the time of Hippocrates, it is by no means unique to medicine and medical education. Weiner (1950) equated the control of a biological system to learning, stating that if information about performance was provided, it could impact upon learning. Ende (1983) drew on the work of engineers from the 1940's who used feedback as part of an information system to successfully correct deviations from the desired flight path of rockets Van de Ridder et al. (2008) make reference to the early use of the term from electronics, namely the phenomenon of the distortion in sound that results from feedback from a speaker to a microphone. Therefore a systems approach (Donabedian 1988) towards provision of feedback was adopted. Comments or corrections about the standard to be obtained from supervisors were viewed as the input, which would bring about the desired change in the performance of students – the process. This would result in the output of more competent clinicians. However, for a successful feedback process to occur, there has to be observed behaviour change on the part of the student – the feedback loop has to be closed (Boud 2015). If not, all that has taken place is the transmission of information from student to supervisor. Therein lies the crux of the challenge of providing feedback. Such a simplistic linear approach does not account for the contextual, content and environmental issues that impact on students, who do not function as machines and automatically respond to commands on how to correct deviation from the norm (Boud and Molloy 2013a, Boud and Molloy 2013b, Boud 2015, Telio et al. 2015).

This approach is compounded by multiple other factors. Firstly, multiple definitions of feedback exist, as discussed above, yet there is still a lack of an operational definition that is reliable, clear, measurable and reproducible and which will allow for a better understanding of concept, content and process (van de Ridder et al. 2008, McKinley et al. 2010). As a result of this lack of a definition, or differing understandings of different definitions, both trainees and supervisors have different expectations that are then at risk of not being met.

Secondly, allied to this is the lack of a global model or framework for delivery of feedback incorporating the elements identified by Ende (1983), Archer (2010), DeLima Thomas and Arnold (2011), Boud and Malloy (2013b) and others. This has led to a plethora of different models and guidelines being proposed, ranging from the process of feedback being described as being analogous to giving bad news, (DeLima Thomas & Arnold, 2011) as akin to the behaviour change model (Milan et al. 2006), or being incorporated into clinical formative and summative assessment models through the addition of specific interventions for improvement (McKinley et al. 2010). It has also been housed within a competency-based educational framework like the CanMEDS (Fluit et al. 2012). However, no model as yet has conclusively shown to make a definite difference in improving the process.

The lack of student engagement in the feedback process results in students being unable to recognise feedback when it is given, creating the misperception that there is no, or poor, feedback being given. Ironically, students indicate even greater dissatisfaction with receiving only a compliment rather than feedback. Students indicate a certain willingness to achieve the desired proficiency, since it follows that by the very nature of their chosen profession, medical students and doctors are high achievers, and so both want, and are capable of, achieving the highest standard of competency possible if the appropriate mechanisms are in place (Jussim, Yen and Aiello 1995, Archer 2010, Rogers et al. 2012). Thus, students need to be exposed to the concept of the types and elements of feedback early on in their medical careers, so that they are then able to recognise it when it is being provided, especially since it may differ from a previously held belief of what feedback should be.

Registrars exhibit a range of emotions to feedback. Feedback perceived as negative or threatening to the self, may invoke a gamut of emotions ranging from anger and discouragement to the belief that the feedback was useless, thereby impacting on its intended use. A distressed state of self-worth may result, that may be debilitating and long-lasting (Sargeant et al. 2008, Archer 2010, Kluger and van Dijk 2010, Murdoch-Eaton 2012). These student responses to feedback impact on the complexity of giving and receiving feedback. Therefore students and staff need to be prepared adequately both for

the process itself, as well as the support required thereafter, to prevent inertia, or anything worse, that could result from negative feedback.

Clinical teachers report feeling frustration with the lack of change in performance that results from feedback, so that they then do not feel the need to extend themselves (Archer 2010, Murdoch-Eaton 2012, Shrivastava et al. 2014, McQueen et al. 2016). Further, negative feedback may provoke unwanted reactions, including litigation, making supervisors wary of giving anything other than positive or neutral feedback (McQueen et al. 2016). Also, a differential between the intended message and how it is received is often identified by supervisor and trainee, when feedback, either oral or written, is provided – an example of the distortion referred to by van de Ritter et al. (2008). This indicates a lack of understanding of the complexity of feedback, in how it is both given and received, and requires on-going capacity building in this area, so that information 'transmitted' is 'received and understood' (Nicholson et al. 2008, Murdoch-Eaton and Sargeant 2012). The setting in which training takes place, e.g. a busy ward, may make it difficult to adhere to the basic tenets for feedback, such as directly observing performance, incorporating an improvement plan or engaging with the student to ensure that such a plan, if given, is understood. Even more important is ascertaining whether the student agrees with the feedback (Archer, 2010, DeLima Thomas and Arnold, 2011). While innovative methodologies exist for improving feedback within such settings, such as the One Minute Preceptor (Gallagher et al. 2012), or the Mini-Clinical Examination (mini-CEX) (Norcini 2005), they are often not put to optimal use.

Feedback is often confused with evaluation, and contributes greatly to the lack of clarity surrounding what constitutes feedback (Ende, 1983, Branch and Paranjape, 2002). While feedback is designed to improve performance by measuring performance against a standard, and incorporating a means for improvement, evaluation measures the actual performance itself. In the absence of appropriate feedback, students rely increasingly on the numerical value attached to evaluation, e.g. as reflected in examination marks in order to be able to assess performance. However, often the lack of a plan designed to improve performance in formative feedback means that competencies cannot be improved upon.

Thus, it becomes clear that while there are commonalities in the literature on the importance of, and what constitutes good feedback, consensus still has to be reached on a working definition of feedback in medical education as well as the best framework within which feedback may be delivered. There is a need to skill staff and students on how to give and receive feedback, including post-feedback support mechanisms, and to ensure that the most appropriate form of feedback is given within the context of time and place, so that no opportunity for feedback is foregone. Evaluation in form, content, language and manner of delivery should be clearly delineated from feedback, and the process of reflection encouraged. For good feedback systems and processes to be effective so as to positively impact on performance of registrars, certain elements should be in place. Standards of expected performance should be identified and clearly conveyed to the registrar. Performance should be directly observed by the supervisor and information regarding deficits in performance should be conveyed to the trainee, ideally together with a plan to improve said performance. The setting of defined goals as the standard by which progress and performance will be measured against in the feedback process allows for steady progress of achievement of these goals, particularly as the process of feedback should include a clearly outlined means of rectifying identified deficiencies, in a constructive, non-evaluative manner (Ramani and Krackov 2012, Cantillon and Sargeant 2008). A gradual transition from this conventional, but nonetheless essential version of 'Feedback Mark 1' should be gradually implemented, so that as learning and competence increase the student becomes the centre of this mutual discussion about how to improve competence, and not merely the passive recipient of knowledge. This new and improved 'Feedback Mark 2' will have a greater effect on lifelong love of learning that improves student self-regulation and caters for self-authorship (Boud and Malloy 2013b, Sandars and Jackson 2015).

1.5 Purpose of the study

The use of feedback and its multiple facets, as well as the perceptions of supervisors and registrars, regarding the quantity and quality of feedback, including challenges of provision and reception are all well documented in the literature. However, most of these studies report on these findings in homogenous groups. The effects of diverse cultures, languages, ethnicities and education level, as seen in the heterogeneous composition of

the registrars at the Nelson R. Mandela School of Medicine (NRMSM) of the University of KwaZulu-Natal (UKZN) require further assessment as a challenge to the efficacy of clinical teaching and learning with particular emphasis on the giving and receiving of feedback. Many factors affect the dynamics of the relationship between consultant and registrar that ultimately impact on how feedback is given and received. These factors cannot be viewed in isolation. Factors affecting provision of feedback, especially in terms of quality and quantity, must be cited within the context of the demographic and environmental factors present at this institution.

The literature reports that, in general, there is agreement on the importance of feedback as a means to enhance clinical competence in training. In order to establish whether good feedback practices occur at this institution, this study was undertaken to firstly evaluate what consultants and registrars at this institution perceive the quality of feedback to be, and to determine discrepancies, if any, that may exist. Further, given that feedback is not merely information given within a mechanical system to effect change, but is dependent on other, external forces as well, an assessment was done on how demographic factors impacted on feedback given at this institution. In addition, the effect of context and environment on the process of the provision of feedback by the main role players was determined to make recommendations for the development of policy guidelines.

1.6 Theoretical framework

The Walt and Gilson Model (1994) has been successfully used in different settings, not only to analyse prevailing circumstances but to develop policies to guide interventions for improvement (Walt et al. 2008). It allows for the examination of multiple factors that impact on policy and makes use of thematic analysis of qualitative data that is increasingly being called for in policy development (Mays, Pope and Popay 2005).

This model is grounded in a political economy perspective. Its elements include the content, context and process, as well as the actors – all the key stakeholders - and how each interacts with the other, all of which affect the policy-making process (Walt and Gilson 1994). Context is the environment within which the intervention is to be implemented, and is affected by both internal and external factors while content refers to

the policy to be developed, and what it is being developed for and about (Walt et al. 2008). Content is affected not only by policies in effect at present, but also by the policy to be developed. The actors are those that are responsible for developing and implementing the policies, as well as those who will ultimately influence the practice of the policy (Gilson, 2012).

In this study, the model representing the framework as illustrated in Figure 2, was used to examine the role of the actors, i.e. the consultants, registrars and organisations, as well as the disciplines that are affected by the process of feedback in clinical training postgraduate medical education.

Context

Actors
individuals
groups
organizations

Content   **Process**
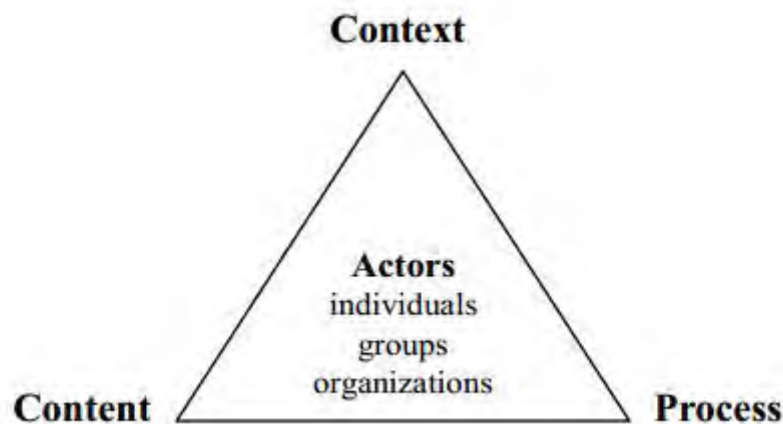
Figure 2: Policy analysis triangle. Source: Walt and Gilson (1994 p354)

The content was the quality, type, timing, quantity and location of feedback, in keeping with a definition of what the 'ideal' should be. The context examined the demographic factors: age, race, gender, language, discipline, year of study or specialisation that impacted upon giving and receiving of feedback. Process looked at how feedback was being given at this institution, with particular reference to the barriers impeding the process, as well as recommendations from some of the actors, namely consultants, as to how best to improve the mechanism.

1.7 Aim of the study

Using mixed methods research, this study aimed to investigate the perceptions of the registrars, consultants and Clinical Training Heads regarding the quality and factors that influence the process of giving and receiving feedback, so as to make recommendations for improvement and to develop policy guidelines for the enhancement of postgraduate clinical speciality training in diverse clinical training environments.

1.8 Objectives

The specific objectives of the study were:

1. To explore the perceptions of consultants in the six major clinical disciplines regarding the feedback they give to registrars with regards to the development of their clinical competence in postgraduate medical education.

2. To explore the perceptions of first to final year registrars in the six major clinical disciplines regarding the feedback they receive in their clinical training at an academic hospital setting.

3. To investigate the effect of demographic differences and professional experience of consultants and registrars on the giving and receiving of feedback respectively.

4. To develop policy guidelines for giving and receiving effective feedback for postgraduate medical education training at this institution.

The structure of this thesis is as per the College of Health Sciences regulations for a PhD thesis by manuscripts (Appendix 1). This thesis is based on four empirical studies and Chapters Two, Three, Four and Five were developed to be read as separate manuscripts. Consequently there is an unavoidable degree of overlap and repetition between chapters.

Chapter 1 includes an introduction to the research and outlines the rationale for the study. The results of the study are presented in the manuscript format. Chapter 2 (Objective 1) presents the findings of the perceptions of the consultants regarding the feedback that they give registrars (manuscript published). Chapter 3 (Objective 2) discusses the perceptions of the registrars regarding the quality of feedback received (manuscript published). In Chapter 4 (Objective 3) the relationship between demographic factors and provision of feedback is explored (manuscript in press). The context, content and process

of feedback as well as the roles of the actors involved in delivery and the effect that this has on the present process is unpacked in Chapter 5 (manuscript in review). Chapter 6 is an integrated discussion summarizing the key findings together with a critical analysis of the results, the study limitations, and provides recommendations with policy guidelines emanating from the study.

Ethical clearance and gatekeeper approval for the study was granted by the Humanities and Social Sciences Ethical Committee, UKZN (HSS/1185/013D) (Appendices 2 and 3). Informed consent was obtained from participants (Appendix 4). The questionnaires used in the study are attached as Appendices 5 and 6.

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CHAPTER 2: FEEDBACK AS A MEANS TO IMPROVE CLINICAL COMPETENCIES: CONSULTANTS' PERCEPTIONS OF THE QUALITY OF FEEDBACK GIVEN TO REGISTRARS

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In this chapter, the consultants' perceptions of the quality of their feedback given to registrars are explored. The study found that consultants lack the capacity to provide consistent high quality feedback within the clinical training environment. Consultants require ongoing training and development in the art of providing feedback.

Research

Feedback as a means to improve clinical competencies:
Consultants' perceptions of the quality of feedback given to registrars

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Background. Effective supervision by consultants in postgraduate medical education involves the process of feedback. Giving feedback may be challenging for consultants who have no formal training in this process, which may be further compounded in heterogeneous diverse settings.
Objective. To explore consultants' perceptions of feedback to registrars in a multicultural, multilingual diverse academic hospital setting.
Methods. Thirty-seven consultants consented to completing a questionnaire on what, when, where, how often, and how feedback was provided, as well as on the type and effect of feedback to registrars. Descriptive statistics were used to analyse the data. Differences between groups were calculated using Pearson's χ^2 test for independent variables, with a p-value of <0.05 regarded as being statistically significant.
Results. Only 40% of consultants reported that they provided feedback often or always and 62.2% reported that standards were not predetermined and communicated to registrars. When feedback was provided, it was based on concrete observations of performance (78.4%), it incorporated a plan for improvement (72.9%) and it supplied information on techniques performed incorrectly (72.9%). Only 40.5% of consultants provided feedback on procedures performed correctly. Moreover, only half of the consultants believed they were proficient at giving feedback.
Conclusion. Consultants need to develop the art of giving feedback through appropriate training so that they are more comfortable and proficient with the various aspects of feedback, leading to a positive effect on enhancing registrar training.

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Effective supervision in postgraduate medical education involves the process of feedback, which may – in practice – be ineffective or inconsistent.[1] Based on the literature,[2-6] this study defines feedback as 'a process whereby the desired standard of proficiency in a task has been clearly established. This standard has been communicated to the student. Gaps in performing the task or level of knowledge are identified, and the student is made aware of his or her shortcomings, together with a plan to improve performance.' As medical education has moved beyond the paradigm of 'see one, do one, teach one',[7] consultants need to be capable of providing suitable training guidance to ensure that graduates are clinically and otherwise competent. This should have a positive effect on patient outcomes, foster a life-long love of learning and the process of reflection, and promote good ethical practice. This process involves more than didactic input. It includes suitable feedback, so that competencies may be enhanced and improved and deficiencies corrected.[8] It might be argued that if some (or all) of the elements contained in the definition are missing, feedback is not being adequately provided in clinical settings, thus affecting the calibre of specialists subsequently produced.

Feedback has been well recognised as an important component of education and can have an extremely powerful and positive effect on learning.[2,8,9] It is regarded as integral and essential to postgraduate medical education,[4] a concept that is similar to that of serving an old-fashioned apprenticeship in an experiential learning setting. Without feedback, poor performance is not corrected, good performance is not entrenched and magnified, and no plans for improvement are implemented.[10,11] Feedback that meets all the defined criteria can positively influence the performance of doctors.[12] The importance of suitable external feedback by consultants to registrars becomes critical when there is no self-assessment by registrars or if the feedback is inaccurate.[13] Giving feedback may be challenging for consultants who have no formal training in the process, which may be further compounded in heterogeneous settings involving students of different gender, ethnicity, race, socioeconomic backgrounds, educational levels and home or first languages.[14] Consultants need to be sensitive to the different dynamics at play to ensure that the same message 'transmitted is received and understood'[15] by the different groups in the same way.

Furthermore, several authors have reported that consultants often believe that they provide adequate, timeous and sufficient quality feedback, despite evidence from registrars indicating the contrary.[4,5,10,13] Given the importance of feedback as an essential component of medical education, this discrepancy is of great concern and needs to be monitored. Hence, this study was undertaken to explore the consultants' and registrars' perceptions of feedback given and received. The study focuses on the perceptions of consultants with regard to the quality of feedback they provided to registrars employed at an academic hospital.

Methods

A questionnaire was designed to ascertain the consultants' perceptions on what, when, where, how often, and how feedback was provided, as well as on the type and effect of feedback to registrars. Sociodemographic information (age, gender, home language, discipline and years of specialisation) was also gathered. A definition of feedback, as discussed above, was also included in the questionnaire to try to prevent any misconceptions with regard to the basic tenets of this process. Responses were reported on a 5-point Likert scale (Figs 1 and 2). Although this observational study adopted a mixed-methods approach, this article focuses on the quantitative data used to survey the overall perceptions of the consultants. The qualitative investigation of these perceptions will be reported in a follow-up study.
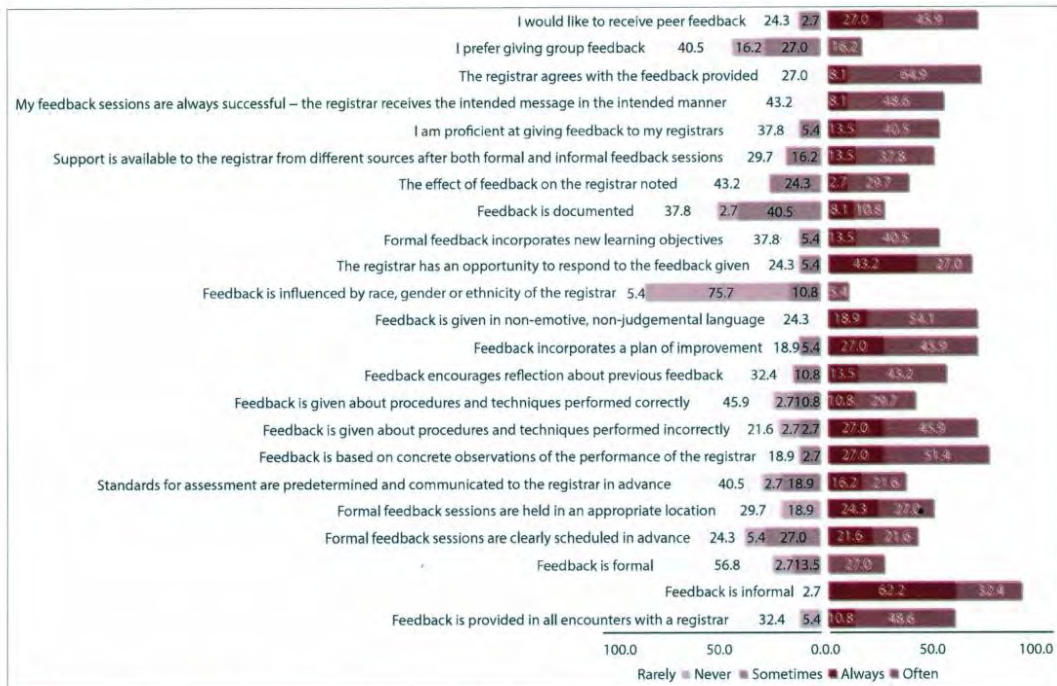
Fig. 1. A divergent stacked bar graph showing consultants' perceptions on the feedback they give to registrars.

Fig. 2. A divergent stacked bar graph showing consultants' perceptions on the feedback they give to registrars with regard to graduate attributes.

All consultants from the disciplines of Surgery, Internal Medicine, Obstetrics and Gynaecology, Paediatrics, Psychiatry and Family Medicine were invited to participate. Because of a 0% response rate to the online questionnaire, hard copies were distributed at academic day meetings; 62% (n=37) were returned anonymously with informed consent. Descriptive statistics were used to interpret the responses of the registrars, with mean values calculated. Differences between groups were calculated using Pearson's χ^2 test for independent variables, with a p-value of <0.05 regarded as statistically significant. Ethical approval for the study was granted by the Humanities and Social Sciences Ethical Committee, University of KwaZulu-Natal, Durban, South Africa (HSS/1185/013D).

Results

The mean age of the consultants was 37.8 (range 31 - 55) years. Fifty-four percent were female. English was the first language for the majority of consultants (n=31), while six spoke another language. Six consultants had qualifications other than the Colleges of Medicine of South Africa Fellowship in their respective fields: 1 had a PhD in Surgery, while the other 5 had postgraduate certificates in their respective fields. Thirteen consultants from Paediatrics, 9 from Internal Medicine, 8 from Obstetrics and Gynaecology, 3 from Surgery and 2 each from Psychiatry and Family Medicine responded.

As illustrated in Fig. 1, 62.2% of consultants reported that standards for assessment were not predetermined and communicated to registrars in advance – always or often. All consultants reported that they provided feedback, but only

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~40% provided feedback always or often. The majority of consultants based their feedback on concrete observations of registrar performance (78.4%), incorporated a plan for improvement in their feedback (72.9%), or provided feedback on techniques performed incorrectly (72.9%). However, only 40.5% provided feedback on procedures performed correctly, while 56.7% thought that feedback encouraged reflection about previous feedback. The vast majority gave informal feedback (94.6%). Only 27% gave formal feedback that was clearly scheduled in advance, given in an appropriate location and that incorporated new learning objectives – only half of the time. Feedback given was influenced by race, gender or ethnicity of the registrars – sometimes (10.8%) and often (5.4%). Seventy-three percent reported that feedback was given using non-emotive, non-judgemental language, and 70.2% of consultants gave registrars an opportunity to respond to feedback, but only 32.4% noted the effect of feedback on the registrar. A total of 51.3% reported that support for registrars was available after feedback. While 73% of the consultants felt that the registrar agreed with the feedback, 54% reported that they were proficient at giving feedback and believed that their intended message was received. Most consultants (83.7%) preferred giving feedback one on one, and would have liked to receive peer feedback (72.9%).

Registrars need feedback on both technical and other specific skills and on graduate attributes to improve outcomes. With regard to technical skills, feedback on how to be a professional was provided always or·often (59.4%), while the specifics around being a medical expert (56.7%), communicator (64.8%), collaborator (75.6%), manager (75.6%), health advocate (64.8%), and scholar (59.4%) were neglected. Sixty-two percent of consultants believed that they always or often provided feedback about clinical skills, technical skills and evidence-based practice, but feedback about interpersonal skills (67.6%), communication skills (59.5%) and ethics (54%) was rarely or never provided.

This study found that consultants delivered feedback in a variety of settings. While no consultants provided feedback during group teaching, 84% gave feedback during academic days, 62% made use of side-room settings, 50% provided one-on-one feedback, and 32% gave feedback at the bedside. No statistically significant relationship was observed between the age of consultants and how they perceived feedback to be provided. With regard to gender, male consultants believed that they were proficient at giving feedback, significantly more than their female counterparts ($p=0.041$, mean 21.91).

Consultants whose mother tongue was English showed significant differences compared with other language speakers, as they gave more feedback about how to be a communicator ($p=0.031$, mean 20.58), a collaborator ($p=0.017$, mean 20.74) and a manager ($p=0.052$, mean 20.44). Provision of feedback was significantly influenced by race, gender and ethnicity of registrars, more so in consultants who were English second-language speakers ($p=0.05$, mean 27.58) than English first-language speakers.

Discussion

The importance of providing feedback in registrar training has been well documented.[1-5] A good approach to feedback is essential and several necessary elements have been identified for successful feedback to occur and ensure that the process attains the desired end result of improving performance.[2,4,16,17] Two of the fundamental requirements for an appropriate and adequate feedback process involve: (i) the development of the desired stan-

dards to be obtained, and for these standards to be clearly communicated to the registrar in advance; and (ii) that the consultant's feedback be based on direct observation of the registrar's performance and compared with the desired standard to be achieved. Such feedback must include an improvement plan to overcome any deficiencies between actual and desired performance.[3,4] The majority of consultants did not communicate such desired 'gold standards' to the registrars. Furthermore, more than one-quarter did not base their observations on direct observation of performance or provide a plan for improvement in the feedback given. Therefore, registrars did not always have a clearly defined set of rules as a benchmark. These findings highlight essential fundamental flaws in the current practice of feedback across the disciplines at our academic hospital. This study suggests that each department should develop a set of guidelines that should be given to registrars at the beginning of a rotation, and consultants should be made aware that the feedback process hinges on direct observation of performance and incorporates improvement plans. Moreover, while feedback is used to correct deficiencies, it should also enhance good performance. The majority of consultants did not give feedback on procedures performed correctly, hence missing the opportunity to cement good practice.[5]

All consultants reported that they provided feedback, but the majority provided it infrequently and informally. With this·approach, registrars will not always recognise feedback as feedback, and may not pay as much attention to it as when it is formally scheduled in advance.[1] Owing to the experiential nature of the clinical teaching setting, it is of concern that consultants do not optimise all opportunities with the registrar to provide feedback. This is an indication that many teaching opportunities are being lost. Many consultants provided teaching at the bedside, a valuable setting for practical demonstration of clinical skills. However, academic days, which could be the best time for emphasising 'softer' skills, including graduate attributes, professionalism and ethics, were not maximised. A specific time should be set aside for discussions around such aspects on these days. Also, care should be taken to highlight the relevant application of such tenets during case presentations or didactic lectures on the effect that key areas have on clinical care to ensure that graduates are equipped with more than clinical competencies.[17]

As feedback has been likened to giving bad news, the effect of the message on the recipient cannot be ignored.[5] This is particularly important in the diverse multicultural setting of this study. Of note, the majority of consultants were not influenced by the race, gender or ethnicity of the registrar. However, this issue needs to be addressed, as not all consultants reported that feedback was given in a non-emotive and non-judgemental way. This is a major concern and counteracts the purpose of giving feedback – to improve performance – as registrars should not be in a position of reacting to how something was being said, rather than what was being said, and so losing the intended message.[5]

Similarly, not noting the effect of consultants' feedback on registrars, could have a harmful result. In the face of negative criticism, some registrars lack the emotional capacity to recover from this and may flounder in their attempts to improve on their performance.[5,18] Conversely, others, particularly those with strong personalities, may choose to believe that their consultants are incorrect and persist in their chosen behaviour.[18] It is therefore vital not only to be cognizant of the effect of both formal and informal feedback, but also to ensure referral to appropriate support structures should these be required; however, only 45.9% of consultants were aware of the support structures that registrars could access or be

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referred to. While the majority of consultants gave registrars an opportunity to respond to feedback, when this did not occur misunderstandings and misconceptions were not clarified.

Consultants and students need to be skilled in the art of giving feedback.[2,4,6] Only half of the consultants felt that they were proficient in providing feedback and gave feedback often. Also, less than a third gave feedback about technical skills. As providing feedback is key to improving academic outcomes and clinical proficiency, inadequacies in being able to provide feedback generally and about essential competencies highlight a gap in the key performance areas of consultants and indicate the need for staff development, in addition to a possible postgraduate clinical qualification for employment in an academic teaching hospital.

It is encouraging that all consultants agreed that feedback was essential to registrar training and the vast majority felt that they should be trained to give feedback. Consultants are aware of the importance of feedback in honing relevant skills and of their own deficiencies and the need to rectify these through appropriate training. The race, gender and ethnicity of the registrars affected the provision of feedback significantly more for English second-language consultants than for English first-language speakers. The latter consultants were probably more aware of the barriers that non-proficiency in the medium of instruction could pose and took care to overcome them. Conversely, given that all communication between registrar and consultant is in English, the consultants for whom English was their home language believed that they were skilled in providing feedback, possibly because of their ease of use of the language. Consequently, they did not pay as much attention to ensuring that feedback was as successful as it should be, especially for registrars who were not as proficient in English as they were. However, regardless of race or language, generally male consultants believed that they were more proficient at providing feedback than female consultants.

Conclusion

The study found that the art of giving and receiving feedback has to be nurtured so that consultants are more comfortable with and proficient in the process, not only in specific skills, but also with regard to essential graduate outcomes. To train consultants in this process would entail a form of continuing professional development, especially as they are recruited on their clinical skills and the assumption that knowing how to do a procedure equates to being able to communicate it well, without any formal exposure to didactic instruction. This would encourage a process of reflection and seeking feedback from registrars, starting in the preclinical years. An integral

component of this training would have to be recognising the effect of feedback on registrars, so that any undesirable outcomes could be appropriately dealt with, be it refusal to accept the feedback or negative emotional reactions. Support structures and mechanisms must be developed internally by disciplines and the university at large, and referral pathways must be developed and communicated to consultants and registrars so that they are able to access these quickly and confidentially if and when required. While it is gratifying that most consultants were able to embrace the multicultural and diverse setting, a small majority appeared to be affected by race, gender and ethnicity. We recommend that appropriate programmes addressing diversity issues be implemented so that no-one is prejudiced by these apparent biases.

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CHAPTER 3: FEEDBACK AS A MEANS TO IMPROVE CLINICAL COMPETENCIES: REGISTRARS' PERCEPTIONS OF THE QUALITY OF FEEDBACK PROVIDED BY CONSULTANTS IN AN ACADEMIC HOSPITAL SETTING

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In this chapter, the findings of a study done on the registrars' perceptions regarding the quality of feedback provided to them by consultants, is reported upon. Registrars reported an overall dissatisfaction with the quality, quantity and timing of feedback. Many of the fundamental elements of the feedback process appeared to be missing, and registrars highlighted the deficiency in the ability of consultants to provide feedback. The need for skilling consultants in how to adequately provide feedback was re-emphasised.

Feedback as a means to improve clinical competencies: Registrars' perceptions of the quality of feedback provided by consultants in an academic hospital setting

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Background. The training of novices, in any field, to achieve the optimum state of cognitive, clinical, technical and professional development requires a variety of teaching methodologies, including the process of feedback. Feedback is defined as a process where the desired standard of proficiency in a task has already been established and communicated to the student before gaps in performing the task or in the level of knowledge are identified. The process of feedback has often been evaluated and has consistently revealed students' dissatisfaction with the amount and type of feedback they receive in their clinical and postgraduate training, as they perceive it to be inadequate, inappropriate or non-existent.
Objectives. To investigate the perceptions of the quality of feedback received by a diverse, heterogeneous population of registrars in postgraduate training at an academic hospital.
Methods. A study was conducted using a questionnaire to determine the perceptions of all registrars in the six major clinical training programmes with regard to the quality, efficacy and effectiveness of feedback received during clinical training. Descriptive statistics were used to interpret the responses of the registrars, with mean values being calculated.
Results. Perceptions of the quality of feedback received differed across disciplines. Overall, the registrars rated the feedback they received as poor. The majority (51.4%) reported that both formal and informal feedback was only sometimes, even rarely, received during all encounters with consultants. Others (51.3%) felt that the feedback received was unacceptable, and did not perceive it to be based on concrete observations of performance. The proficiency of consultants in giving feedback was scored as unacceptable by 64.8% of registrars.
Conclusion. Registrars in training regard feedback as an essential component of their postgraduate medical education and as an important component of achieving clinical competence. More formalised processes need to be implemented. The majority of registrars agreed that consultants required training in providing feedback effectively.

The training of novices in medical specialties to achieve the optimum state of cognitive, clinical, technical and professional development requires the use of a variety of teaching methodologies, including the process of feedback. This level of excellence can only be achieved if the gaps between actual and desired performance are reported to the trainee by a more experienced supervisor, together with a plan for improvement.[1] The failure of feedback mechanisms can contribute to incompetent healthcare professionals.[2] This is due to various reasons, including the failure of students to recognise different forms of provision of feedback; when and where feedback is provided; incapacity of the teacher; operational demands of the clinical setting; lack of clearly defined teaching and learning objectives; and inadequate support mechanisms for students not meeting such objectives.[1]

Training to become a doctor is almost the same as serving an old-fashioned apprenticeship, during which skills from more experienced seniors are passed on to students in an experiential learning setting.[3-5] As training progresses in postgraduate specialisation, the need for constant, high-quality feedback from clinical supervisors/mentors to students intensifies to aid in the development of the trainees' finely honed competencies in their chosen field. It is only through the provision of feedback that strengths can be identified and amplified, and corrective measures can be put in place to overcome deficiencies.[4,6] Traditionally, consultants in academic teaching hospitals were held in high esteem for their clinical expertise. Students were expected to learn from observation, rather than being taught by consultants competent in the formal art of teaching. This process is often compounded by service delivery, as tending to patients takes precedence over more time-consuming explanations about details of and reasons for processes followed. However, the failure to provide this essential component of training may contribute to incompetent and poorly trained clinicians, resulting in poor patient outcomes.

Ende,[6] in his seminal article, defined feedback in clinical medical education as 'information describing students' or house officers' performance in a given activity'. Feedback addresses the deficit in meeting a predetermined standard of desired skills by identifying the area of poor performance and devising a means to achieve the standard. It is used to promote the desired, high-quality performance in trainees through raising awareness of current skills in high-level performers.[7] However, to be effective, the process needs to be a formalised assessment of performance, with a corrective plan of action to address deficiencies – a 'learning through guiding' process.[5,8,9] In this way, the trainee receives clarification of the process he or she followed compared with what was expected; on how to address the gap between actual and intended performance; and, most importantly, of the consequences for patient outcomes should the current performance go unchecked. Ideally, this should prompt a behaviour change in the trainee to achieve the desired standard.[7,8]

The lack of appropriate feedback in guiding students on when and how to change, and taking note of and acknowledging what is being done well, can soon lead to disillusionment of the student.[10] However, excessively praising or complimenting the student, which is not feedback in the true sense, has been shown to be equally unsatisfactory over time.[11] With appropriate feedback, students develop autonomy in implementing suitable corrective mechanisms to achieve the desired standard of competence,[10] and are able to critically self-assess performance.[11] As the student makes the transition from under- and postgraduate student to independent practitioner, this skill will prove a valuable resource in the context of an evolving set of competencies, as it aids in a positive approach to lifelong learning, which is expected of a competent doctor. Therefore, even practising physicians, in whom the art of self-reflection (which should be a component of feedback) has been inculcated in their clinical training, are cognizant of the need for continuous medical education and feedback, leading to improved patient outcomes.[12-14]

Feedback has often been evaluated, which consistently reveals students' dissatisfaction with the amount and type of feedback they receive in their clinical and postgraduate training, as they perceive it to be inadequate, inappropriate or non-existent.[14,15] To achieve clinical competence that will result in optimal patient care and outcomes, trainee errors must be rectified and competencies reinforced, especially in the context of workplace 'experiential' learning. This study explores registrars' perceptions of feedback provided by consultants at a teaching hospital across six clinical disciplines, i.e. Internal Medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Psychiatry and Family Medicine.

Methods

Although a mixed methods approach was adopted for this study, this article reports only on the quantitative data collected. The study population comprised all registrars (i.e. qualified doctors undertaking postgraduate specialisation training) employed at a major teaching hospital attached to the Nelson R Mandela School of Medicine (NRMSM), University of KwaZulu-Natal, Durban, South Africa. All registrars from the disciplines listed above were invited to participate in the study via an online questionnaire. Owing to a low response rate, questionnaires were also handed out at departmental academic days. Thirty-seven out of a total of 60 registrars consented to participate in the study.

Questions related to various aspects of how feedback was given, including: when (e.g. 'Feedback is provided in all encounters with a consultant'); where (e.g. 'Feedback is provided in all settings'); type (e.g. 'Feedback is informal'); effect (e.g. 'The effect of feedback on the registrar is noted'); topic (e.g. 'Feedback is given about clinical skills'); and how (e.g. 'Feedback is given in non-emotive, non-judgemental language'). Sociodemographic information regarding age, gender, home language, discipline and year of study was also gathered. Registrars responded using a 5-point Likert scale (1 (never) - 5 (always)). A definition of feedback was also included: 'For the purposes of this study, feedback is defined as: A process whereby the desired standard of proficiency in a task has been clearly established. This standard has been communicated to the student. Gaps in performing the task or level of knowledge are identified, based on actual observation of the student, and the student is made aware of his or her shortcomings, together with a plan to improve performance.'

Descriptive statistics were used to interpret the responses of the registrars, with mean values being calculated. Differences between groups were calculated using Pearson's χ^2 test for independent variables, with a p-value of <0.05 regarded as being statistically significant. Responses were combined to give an overall negative (1, 2 and 3) and positive (4 and 5) response to certain questions.

Full ethical approval for the study was received from the Humanities and Social Sciences Ethical Committee, University of KwaZulu-Natal (HSS/1185/013D).

Results

The mean age of the registrars was 32.3 (range 27 - 43) years. The majority were female (64.9%) and first-language English speakers (54.1%). Only two of the registrars had a postgraduate diploma and one had a Master of Medicine (MMed), while the remaining 34 had completed only their basic undergraduate medical degree. Most of the registrars (n=16) were in their 4th year of training, 12 were in their 3rd year, 7 were in their 2nd year, and 2 had just commenced training. The registrars' specialisations were divided as follows: Paediatrics (n=9), Obstetrics and Gynaecology (n=9), Surgery (n=7), Internal Medicine (n=6), Psychiatry (n=3) and Family Medicine (n=3).

Overall, registrars rated the feedback they received as poor, as illustrated in Fig. 1. The majority of registrars (51.4%) reported that both formal and informal feedback was only sometimes, even rarely, received in all encounters with consultants. The location of formal feedback sessions was perceived as appropriate (59.4%), but the advance scheduling of such sessions was not (62.1%).

A total of 48.6% registrars rated equally the provision of standards for assessment being predetermined and communicated in advance. However, 51.3% felt that the feedback received was unacceptable, and did not perceive it to be based on concrete observations of performance. The majority reported that they did not receive feedback on techniques performed incorrectly (54.0%) or on those performed correctly (67.5%). Many registrars (59.4%) perceived that feedback was not being documented.

More than half (56.7%) of registrars reported that the intended message was not received and the same percentage perceived insufficient opportunity to respond to the consultant. Overall, 54.0% did not agree with the content of the feedback.

When formal feedback was given, 64.8% of the registrars believed that a plan for improvement had been given, while 59.5% reported the inclusion of new learning objectives. Some 67.6% of registrars positively reported reflecting on previous feedback as a result of current feedback. The language in which feedback was given was perceived to be non-emotive and non-judgemental by 64.8%. In a similar vein, 56.7% of the registrars believed that the feedback received was not influenced by race, gender or ethnicity.

The proficiency of consultants in giving feedback was scored as unacceptable by 64.8% of registrars, while 59.4% perceived that the effect of feedback on them went unnoticed, and 67.5% noted that there were no support structures for students after receiving feedback.

Other results showed that a majority of the registrars (91.7%) believed that consultants should be trained to provide feedback and all agreed that feedback about registrars' clinical proficiency was important.

The exit examination for specialisation – Fellowship of the relevant College of the Colleges of Medicine of South Africa – requires specific preparation in the honing of clinical skills, how to answer written examination questions and make presentations during oral examinations. While 83.3% of registrars agreed that feedback was provided in preparation for these examinations, only 58.8% felt that this feedback was adequate. Some 45.7% thought that it
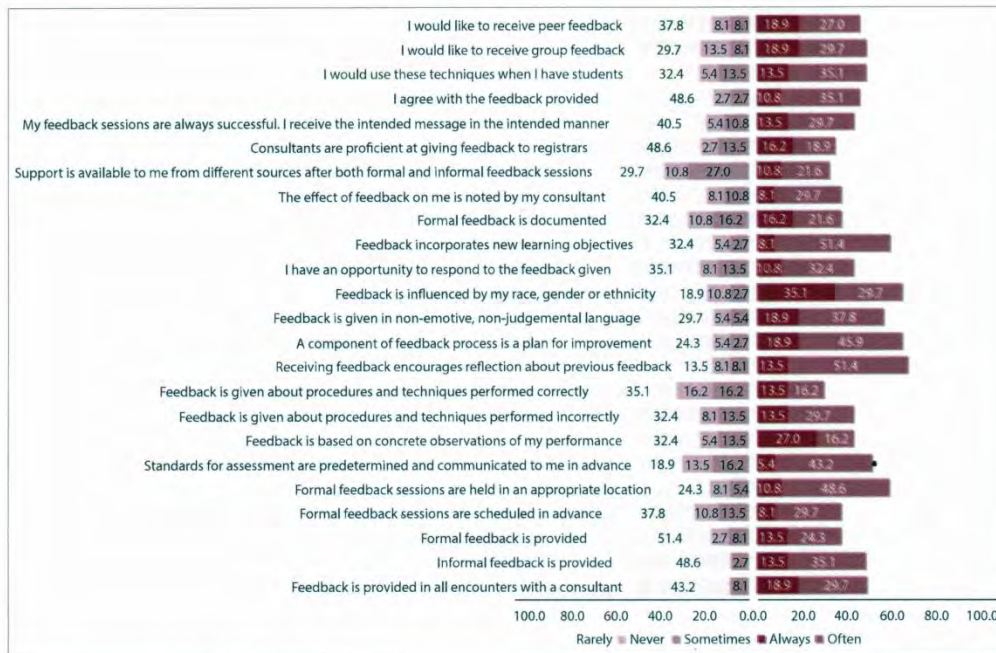
Fig. 1. How registrars believe feedback is provided.

was provided in a timely manner. While 61.1% of the registrars reported that feedback was provided on how to obtain their MMed qualification in terms of the protocol preparation, research and administrative processes, less than half thought the information was provided adequately (44.4%) or timeously (41.7%). The majority (70.6%) believed that the esteem in which they held their consultants influenced the manner in which they received feedback.

Multiple settings are available for provision of feedback. Registrars reported that feedback was provided in various settings: 25.0% during group teaching, 22.0% at the patient's bedside, 20.0% during academic days, and 17.0% during one-on-one teaching. No feedback was given in side-room settings. A majority (87.1%) thought that feedback provided by consultants differed between academic hospitals in KwaZulu-Natal.

Discussion

This study explored the perceptions of registrars' feedback given to them by their consultants at a teaching hospital in six academic disciplines. A fundamental tenet of feedback is the need to improve on performance by identifying the gaps when comparing actual performance with the desired level of competence to be achieved and a previously identified standard. The information with regard to what is missing should be conveyed to the trainee, ideally together with a plan to improve said performance.[4,6] The predetermination of standards to be achieved is a key component.[6] In this study, registrars were divided in their opinions as to whether this

fundamental component of feedback was met. The lack of guidelines that delineate the desired standards and learning objectives to be achieved may leave registrars unsure as to how best to acquire competence in areas of deficiency, as feedback given may be misunderstood.

A core component of medical education is the transfer of skills from an experienced senior to an inexperienced novice in a workplace. Assessing performance and providing timeous feedback at the patient's bedside or shortly thereafter is a type of brief feedback that forms part of a wider spectrum of types of feedback.[1] It is therefore of concern that this study found that feedback was infrequent and not often given at the bedside of the patient, a prime area for highlighting clinical management.[6,7] This finding highlights the need to encourage consultants to provide more feedback, as the experiential clinical setting is particularly conducive to training.[5]

As far back as the 'apprenticeship' that medical students served in the days of Hippocrates, the importance of feedback has been well documented as a means of ensuring that underperforming students achieve the desired level of competence, informing competent students of the skills that they are using, encouraging increasing use of those skills, and focusing the attention of students on the consequences of not performing optimally.[1,5,7,8,15,16] Of grave concern is that the majority of registrars reported that no feedback was given when techniques were performed incorrectly and that opportunities for entrenching good practice were also missed. It is essential for these deficiencies to be addressed to prevent registrars' clinical competence and training being compromised.

In a study comparing the giving of feedback to the process of breaking bad news, emphasis is placed on the importance of the supervisor being fully cognizant of the standards against which performance is assessed, and how these apply to learners at different levels.[8] Being able to respond to feedback allows registrars the opportunity to clarify areas of deficiencies and the steps needed to rectify such deficiencies, which increase the possibility of improvement. The majority of registrars reported not receiving the intended message and not agreeing with the feedback. This is further compounded by them reporting that they were not given an opportunity to respond. This is a serious concern, as these findings may have the detrimental effect of causing the registrar to feel the process is unhelpful, with no clear direction of how to improve, leaving him or her inert, demoralised and fearful to proceed in case of erring. Worse still, the registrar may come to believe that the consultant is wrong and so may persist with incorrect clinical management.[6] Consultants need to be made aware of the effect of feedback on registrars and to ensure that various and appropriate support mechanisms are available to prevent any untoward consequences. Registrars must be at ease in seeking such support.

An appropriate approach to feedback is essential to ensure that the process attains the desired end result of improving performance. This study found that only a third of registrars felt that consultants were competent in providing feedback. It is in the interaction with patients, under the expert eye of the consultant, that these practical areas, which require a 'hands-on' approach and cannot be learnt abstractly or didactically, can be improved, provided feedback is given.[5] Hence, it is critical for supervisors and students to be skilled in the process of giving and receiving feedback.

The Fellowship examination is the exit examination for registrars – an external examination after 4 years of training. The examination has as much to do with being able to present competently and have appropriate examination techniques as with being academically competent. It is disconcerting that, although registrars reported that feedback is provided in preparation for the examination, it is only perceived to be adequate and given timeously half of the time. Such preparation should be an integrated and continuous part of a comprehensive training approach, enabling registrars to present with ease and confidence in their final examinations. It should not be a mere add-on during the last weeks before the examination. Furthermore, information regarding the timelines, and academic support for attaining the MMed qualification, should be standardised to prevent unnecessary delays and improve throughput time in the registrar programme. Our study suggests that a component of the discipline academic day be allocated for formal Fellowship examination preparation to ensure that essential feedback is provided to registrars timeously to allow for adequate preparation.

Conclusion

Good-quality feedback comprising all elements is essential in postgraduate clinical training. While feedback is provided in some meetings with consultants, the essential elements of feedback appear to be missing, i.e. of having predetermined standards to be achieved established and in place, clearly communicated to the registrar beforehand, based on observed performance and incorporating a plan for improvement. Provision must be made for the registrar to respond to feedback and clarify areas of possible confusion, especially with regard to the improvement plan. The findings of this study highlight the need for appropriate and continuous training programmes that must be developed and implemented for consultants to provide and for registrars to receive feedback effectively in the postgraduate medical training settings. A limitation of this study was the small sample size and possible female bias, which can be addressed in future studies by including more academic hospitals to increase both sample size and equitable gender representation.

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CHAPTER 4: EFFECTS OF DEMOGRAPHIC FACTORS ON PROVISION OF FEEDBACK IN A DIVERSE POSTGRADUATE CLINICAL TRAINING SETTING
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In this chapter, the impact of demographic factors on the giving and receiving of feedback within this heterogeneous, multicultural institution was explored. The study found that race, gender and language had an effect on the manner in which feedback was delivered. The relationship between these factors needs to be addressed in clinical training, so as not to negatively impact on registrars acquiring the necessary clinical skills to be competent physicians.

Abstract

A key element in the process of clinical medical education is the process of providing feedback by comparing the directly observed performance of postgraduate doctors training to become specialists to that of a previously identified and communicated 'gold standard' and incorporating a plan for improvement. This is regarded as crucial to enhance clinical competencies. Hence, a greater understanding of the clinical educational environment and the various factors that impact on the giving and receiving of feedback within such a setting is required.

A mixed methods approach was adopted for this observational study regarding the perceptions of the quality of feedback given and received at a large multicultural teaching hospital. Relationships between demographics and certain important aspects of the provision of feedback were observed which impact on the context in which feedback is given and received. The study found that appropriate strategies should be implemented to improve teaching capacity of consultants, together with gender empowerment and academic support programmes for registrars.

Key words: Feedback; quality; registrars; consultants; demographics; clinical environment

Introduction

Within the ambit of clinical medical education, feedback on clinical performance of registrars – qualified doctors receiving advanced training in a specialist field of medicine – by consultants, or senior hospital-based physicians who have completed their specialist training, is regarded as crucial (van de Ridder et al. 2008, Archer 2010). This process of comparing the directly observed performance of registrars to that of a previously identified and communicated 'gold standard' and incorporating a plan for improvement (Ende 1983) is a means to enhance the clinical competencies of registrars. Numerous studies on the provision and receiving of feedback report a discrepancy between registrars' and consultants' perceptions of the process. Registrars report that feedback is provided inadequately or not at all (Cantillion and Sargeant 2008, Boehler et al. 2006, Sender Liberman et al. 2005, Busari et al. 2005), while consultants are of the opinion that

good quality feedback is provided often or always (van de Ridder et al. 2008, Archer 2010, Sender-Lieberman et al. 2005). This disparity indicates that a greater understanding is required of the clinical educational environment and the various factors that impact on giving and receiving feedback within these settings.

Several contributing factors to this discrepancy have been described in the literature. One concerns the highly emotionally charged connotation associated with feedback, when registrars may rate feedback received as being of poor quality because of this, and not because this is actually so. Criticism, even if constructive – that is, given with the intent to improve performance – may be regarded as a 'negative' reflection of worth (Anderson 2012). Thus, any feedback opposing a registrar's self-assessment of their capabilities is rejected to protect their sense of worth (Jussim, Yen and Aiello 1995). However, self-assessment skills are often the poorest in those that are the least competent – the 'rookie' – and those who are the most confident, who tend to have an incorrectly overinflated sense of their abilities (Anderson 2012). Ironically, these are the groups that could most benefit from feedback. Thus, there is a barrier to accepting the validity of negative criticism, especially because the so-called 'Millennial Generation' has repeatedly been told how special they are (Bing-You and Trowbridge 2009). Although other studies support this view that registrars value praise over positive criticism (Boehler et al. 2006), this perceived dissatisfaction may also arise from the fact that registrars lack a clear operational definition of feedback (van de Ridder et al. 2008) and, therefore, are unable to recognise feedback in its different forms when it is being provided (Branch and Paranjape 2002). Also, they may lack the maturational development to distinguish feedback from evaluation (Murdoch-Eaton and Sargeant 2012).

From another perspective, supervisors themselves may lack a framework within which to deliver feedback (Anderson 2012), may not possess the necessary capacity and training (Bing-You and Trowbridge 2009, Ramani and Krackov 2012), or may be fearful of damaging students' self-esteem or endangering personal relationships that they have with their registrars and students (Cantillon and Sargeant 2008).

In addition to this, the operational demands of the clinical setting and heavy workloads may also play a role. Both consultants and registrars have to focus on service delivery rather than didactic teaching, and so learning becomes more an experiential rather a structured process of observation by a consultant with a view to improving the performance of the novice (Shrivastava, Shrivastava and Ramasamy 2014, Zehra et al. 2015, Daelmans et al. 2006).

Broader contextual and environmental issues also impact on provision of feedback. Demographic factors such as race, gender, age and consultants' number of years' experience, and language differences can all influence the process (Shrivastava, Shrivastava and Ramasamy 2014, DeLima Thomas and Arnold 2011, Odom et al. 2007). Globally, race and ethnicity have been shown to affect medical schools in terms of admission criteria, pass rates, extension of probationary periods as well as hiring practices all along the continuum of university applicants, from residents to faculty (Odom et al. 2007, Kogan et al. 2012, Woolf, Potts and McManus 2011, Ferguson, James and Madeley 2002). Ruggs and Hebl (2012) report that students from diverse ethnic backgrounds in the United States of America feel so discriminated against that they are loathe to enter the Science, Technology, Engineering and Mathematic (STEM) fields. In South Africa, African, historically disadvantaged students report that the university environment is uncomfortable and exclusionary, and that they feel alienated from White students or those with a socio-economic advantage (Badat, 2016, Badat 2009). Instead of their educational experiences becoming liberating and uplifting, these exact major psychological, emotional and academic tolls (Badat 2009).

Universities are striving to implement programmes to encourage diversity in staff and student populations and ensure their professional development and success (Odom et al. 2007, Cornell University 2010). However, it would appear that the effectiveness of such efforts is being called into question, as evidenced by increasing protest action of university students (Redden 2015). In 2015, and again in 2016, South African and American students mobilised around demands for free and fair tertiary education, with the #FeesMustFall movement in South Africa and the #MillionStudentMarch, where American students took to the streets making similar demands. This perceived militancy

is in response to the barriers that previously disadvantaged undergraduate and postgraduate students at universities face on multiple fronts. These impediments may be lack of financial or social support, the negative self-image imposed upon them by virtue of their race, or being at a disadvantage because of the language of instruction, often not their home or first language (Odom et al. 2007, Rose, Rukstalis and Schuckit 2005, Ferguson, James and Madeley 2002, Shrivastava, Shrivastava and Ramasamy 2014). These protests were further extended into a call for true transformation of faculties, beyond only having representative numbers of ethnic minorities, with the demand for 'decolonisation' and 'deracialism' of the syllabus itself (Badat 2009).

Therefore, when looking at when and how feedback is delivered within the postgraduate setting, it must be noted that these barriers are factors that impact on feedback, for example, making it difficult for registrars to request it, especially because they may feel uneasy within the teaching spaces (Badat 2016). Further negatively impacting on how feedback can be given effectively, not only on clinical performance, but also, within the South African context, on making this information culturally relevant, is that most consultants have no formal teaching qualifications (Singh et al. 2013). Consideration should be given to how feedback information can be made culturally relevant in these contexts.

With respect to the gender demographic factor, although female registrars are more likely to seek feedback (Sinclair and Cleland 2007, DeLima Thomas and Arnold 2011) compared to males, they are also more likely to report or experience discrimination. Odom et al. (2007) state that female registrars report often being mistaken for nurses. Conflicting evidence is provided by Lee et al. (2009) in a study of residents and academic performance, when they reported that males are more assertive in their communication styles and how they ask for feedback. However, in a systematic review of the literature on positive predictors for success in medical students, Ferguson, James and Madeley (2002) query the practical significance of examining such perceived differences, since significance is only reached in very large sample sizes. They argue that a more powerful factor should be developing intrinsic motivation of registrars, by instilling in them a love for learning that comes from within. This results in registrars seeking out feedback more

actively in order to improve, rather than being externally motivated by the reward of good academic performance. However in a study looking at the gender differences on how consultants provide feedback, male and female consultants did not appear to do this differently due to their gender (Singh et al. 2013).

With regard to the effect of age in the context of provision of feedback, younger registrars performed better academically than older registrars. This could be due to a greater time lapse between resuming clinical work again, or the greater personal responsibility of older registrars (Lee et al. 2009). However, age *per se* did not seem to effect feedback-seeking behaviour (Lee et al. 2009). Although, Wittich et al. (2012) found that registrars perceived older consultants to be better at providing feedback than their younger colleagues, perhaps because they equated experience with excellence. However, Kogan et al. (2012) report that faculty approaches to feedback are based rather on more contextual factors such as their own views on how effective they were at delivering feedback and relational issues, rather than age or experience alone. Academic trainees, i.e. junior doctors with an academic or research component in their training qualification, were also more likely to incorporate a plan for how registrars could improve into ther feedback as compared to areas for improvement than consultants (Fernando et al. 2008).

In previous studies conducted by the authors in the same multicultural academic hospital as the current study, it was found that the majority of the registrars believed that the feedback was not given often enough, was of poor quality and was not based on concrete observations of performance (Bagwandeen and Singaram 2016b). This belief was borne out by the findings that only just over a third of the consultants communicated in advance the desired standards of performance to be obtained and only about 40% gave feedback always or often (Bagwandeen and Singaram 2016a). More importantly, these studies found that the registrars believed that the feedback provided was influenced by their race, gender and ethnicity. Hence, this study aims to explore further the relationship between race, gender, age, home language, discipline and year of study or specialisation and how this effects the provision and receiving of feedback by consultants and registrars, respectively.

Method

A mixed methods approach was adopted for this observational study, to enhance the quality of the quantitative data through the use of illustrative quotes (Creswell, 2013). Perceptions regarding feedback were collected by means of a self-administered questionnaire given to both registrars and consultants at the hospital. The 23 open and closed-ended questions elicited information on feedback, specifically on its nature, how often it was given or received (frequency), its effect, when, where and how it was provided or received and the its type. Other data was collected on demographic and some professional characteristics relating to age, gender, home language, discipline and years of training or specialisation. All 60 consultants and 60 registrars from the disciplines of Surgery, Internal Medicine, Obstetrics and Gynaecology, Paediatrics, Psychiatry and Family Medicine were invited to participate in the study.

Responses to the quality of feedback were reported on a 5-point Likert scale (1 = Never to 5 = Always). Descriptive statistics were used to interpret the responses of the registrars and consultants, with mean values being calculated. Differences between groups were calculated using Pearson's Chi Square test for independent variables, with a p-value of < 0.05 regarded as being statistically significant.

Responses to open-ended questions were read and re-read to ascertain familiarity with the data. Emergent themes and sub-themes were consensually identified by both authors. Relevant quotations were used to support and extend the quantitative data.

Full ethical approval for the study was received from the Humanities and Social Sciences Ethical Committee, University of KwaZulu-Natal (HSS/1185/013D).

Results

Sixty-two percent (n=37) of both consultants and registrars respectively consented to participate in the study anonymously. For ease of reference mostly statistically significant relationships are reported and responses of the participants are combined to give an overall negative (1, 2 and 3) and positive response (4 and 5) to certain questions.

Demographic and professional characteristics of participants

As illustrated in Table 1, consultants were on average 37.8 years old (range 31–55). The majority of consultants were Indian (27), female (20), had been consultants for less than five years (20) and spoke English as their first language (31). Thirteen consultants from Paediatrics, nine from Internal Medicine, eight from Obstetrics and Gynaecology, three from Surgery and two each from Psychiatry and Family Medicine, responded. Six consultants had qualifications other than the Fellowship, one consultant had a Doctorate of Philosophy, while the other five had postgraduate certificates in their respective fields.

As illustrated in Table 2, the mean age of registrars was 32.3 years (range 27–43). The majority of the registrars were Indian (20) and female (24). Most of the registrars (16) were in their fourth year of Registrar training, 12 were in their third year, seven were in their second year, and two had recently commenced training. The registrars' specialisations were divided as follows: Paediatrics (9), Obstetrics and Gynaecology (9), Surgery (7), Internal Medicine (6), Psychiatry (3) and Family Medicine (3). Only two of the registrars had a Postgraduate Diploma, one had a Masters in Medicine, while the remaining 34 had completed only their basic undergraduate medical degree. Twenty of them were first language English speakers and seventeen were second language English speakers.

Table 1: Demographic and professional characteristics of consultants

	N	(%)
Age		
<35	13	(35.14)
35–39	14	(37.84)
40–44	4	(10.81)
>40	6	(13.51)
Race		
Black	4	(10.81)
White	3	(8.11)
Indian	27	(72.97)
Coloured	3	(8.11)
Other	0	(0.00)
Gender		
Male	17	(45.95)
Female	20	(54.05)
Years of Specialisation		
<5	20	(55.56)
5–9	10	(27.78)
>10	6	(16.67)
Discipline		
Surgery	3	(8.11)
Internal Medicine	9	(24.32)
Obstetrics & Gynaecology	9	(24.32)
Paediatrics	12	(32.43)
Psychiatry	2	(5.41)

Family Medicine	2	(5.41)

Highest previous qualification obtained

Fellowship	31	(83.78)
MMed	0	(0.00)
PhD	1	(2.70)
Other	5	(13.51)

Home/First language

English	31	(83.78)
Afrikaans	1	(2.70)
IsiZulu	2	(5.41)
IsiXhosa	3	(8.11)
Other	0	(0.00)

Table 2: Demographic and professional characteristics of registrars

	N	(%)
Age		
<25	1	(2.70)
25–29	5	(13.51)
30–35	25	(67.57)
35–39	4	(10.81)
>40	2	(5.41)
Race		
Black	14	(37.84)
White	2	(5.41)
Indian	20	(54.1)
Coloured	1	(2.70)
Other	0	(0.00)
Gender		
Male	13	(35.14)
Female	24	(64.86)
Years of Specialisation		
1st	2	(5.41)
2nd	7	(18.92)
3rd	12	(32.43)
4th	16	(43.24)
Discipline		
Surgery	7	(18.92)
Internal Medicine	6	(16.22)
Obstetrics & Gynaecology	9	(24.32)

Paediatrics	9	(24.32)
Psychiatry	3	(8.11)
Family Medicine	3	(8.11)
Highest previous qualification obtained		
MBChB	34	(91.89)
MMed	1	(2.70)
Other	2	(5.41)
Home/First language		
English	20	(54.05)
Afrikaans	0	(0.00)
IsiZulu	8	(21.62)
IsiXhosa	1	(2.70)
siSwati	1	(2.70)
Northern Sesotho	1	(2.70)
Sesotho	1	(2.70)
Setswana	1	(2.70)
Xitsonga	0	(0.00)
Tshivenda	0	(0.00)
Southern isiNdebele	0	(0.00)
Other	4	(10.81)

Relationship between gender and perceptions of the quality of feedback given by consultants and received by registrars

Male consultants were significantly more likely than female consultants to rate their feedback sessions as always successful, with the registrars receiving the intended message in the intended manner ($p<0.04$). No other significant relationships were found between gender differences and consultant perceptions.

Male registrars felt significantly more strongly than females that feedback was based on concrete observations of their performance ($p<0.00$), was given in non-emotive and non-judgmental language ($p<0.02$), was given about techniques performed incorrectly ($p<0.00$) and correctly ($p<0.03$) and was not influenced by race, gender or ethnicity ($p<0.00$). Positive perceptions about receiving feedback about certain specific skills, namely technical skills ($p<0.03$) and evidence-based practice ($p<0.00$), as well as desired graduate competencies – how to be a professional ($p<0.04$) – was also statistically significantly higher in male versus female registrars. Unlike females, male registrars were more confident that support was available from different sources after a feedback session ($p<0.04$). They felt more strongly that feedback sessions were always successful ($p<0.01$), and would be happy to make use of the techniques used by their consultants when they had students in the future ($p<0.01$). Males agreed more with the feedback provided ($p<0.03$) than the female registrars.

Male registrars said that after feedback they felt, "Positive. Used the critique in a constructive manner" and "determined to improve and step up performance to perform better", while female registrars were more ambivalent, stating: "According to situation. Happy if positive, sad if negative" and "Sometimes belittled, sometimes encouraged".

Relationship between English first language (EFL) and English second language (ESL) speakers and perceptions of the quality of feedback given by consultants and received by registrars

Consultants who were EFL speakers gave more feedback about specific desired graduate attributes, such as how to be a communicator ($p<0.03$) and a collaborator ($p<0.01$), than consultants who spoke English as a second language. Registrars who were ESL speakers reported statistically significantly more favourably that feedback was based on concrete observations of performance ($p<0.02$), was given about techniques performed incorrectly ($p<0.01$), that a plan for improvement was incorporated into the process ($p<0.04$), that feedback was not influenced by race, gender or ethnicity ($p<0.02$) and that feedback sessions were always successful ($p<0.02$) in comparison to registrars whose first language was English. The ESL group also gave better ratings regarding feedback given about

specific technical skills ($p<0.03$), interpersonal skills ($p<0.00$), evidence-based practice ($p<0.01$) and ethics ($p<0.03$) than those with English as a first language.

With specific reference to these graduate attributes, EFL speaking consultants noted that they gave feedback in order to "Improve their (registrars') learning and communication" and to "Help with their (registrars') personal and professional development". The ESL registrars noted that they "Had made some improvement in personal skills and communication" and "Improved communication with patients".

Relationship between discipline and the perceptions of the quality of feedback given by consultants and received by registrars

Surgical consultants were significantly more likely than consultants in the other disciplines to provide formal and informal feedback in all encounters with registrars ($p<0.00$), to schedule formal feedback sessions in advance ($p<0.03$), to determine standards to be obtained and communicate this in advance to the registrars ($p<0.04$) and provide feedback about procedures performed both incorrectly and correctly ($p<0.00$). For registrars, there was a statistically significant difference between the composite median scores across the disciplines ($p<0.00$), with registrars in Surgery having the highest median perception score, reporting most favourably on the quality of the feedback received. Internal Medicine and Paediatrics had the lowest median overall score. However, no statistically significant difference was observed between disciplines in items relating to whether feedback encouraged reflection about previous feedback ($p<0.11$) or whether they would use these techniques with their own students in future ($p<0.13$).

Registrars reported that the General Surgery gave "Excellent feedback on a regular basis", "had excellent consultants" and "gave regular feedback on progress, with bedside and clinical teaching".

Relationship between year of study and perceptions of the quality of feedback of registrars given by consultants and received by registrars

Registrars in their first year, as compared to registrars in subsequent years, believed more strongly that feedback was based on concrete observations of performance ($p<0.04$), was given about techniques performed incorrectly ($p<0.04$), encouraged reflection about

previous feedback (p<0.00), that it was documented (p<0.01), that support was available to them from different sources after feedback sessions (p<0.04) and that consultants were proficient at giving feedback (p<0.03). First year registrars also had more positive responses as opposed to the senior registrars regarding receiving feedback about skills – both technical (p<0.04) and ethical (p<0.04) – and on specific graduate attributes – how to be a medical expert (p<0.03), scholar (p<0.03) and professional (p<0.02).

Senior registrars felt that feedback, "Doesn't happen often enough" and "Should occur all through the programme". They also noted work pressure and time constraints, stating, "We are expected to be the workforce. No time to consolidate and read".

Relationship between age and experience and the perceptions of the quality of feedback given by consultants and received by registrars
Age did not significantly influence the overall perceptions of the quality of feedback given or received for either consultants or registrars in this study. However, a positive relationship between composite perception score and age of consultant was observed, with the consultants perceiving that they gave better feedback as age increased (p<0.05). Conversely, there was a moderately negative relationship between composite perception score and age of registrar, with the score declining as age increased – the older registrars believed the quality of the feedback they received to be poorer compared to their younger counterparts.

Both consultants and registrars felt that the esteem that consultants were held in influenced how feedback was received and provided. Consultants commented that, "Registrars are more receptive if they have respect for the person providing the feedback" and that "Feedback from a junior consultant seems to hold less weight than from a senior consultant". Registrars concurred, commenting that, "Holding my consultant in high regard helps with the feedback as I value his opinion".

Relationship between race and the perceptions of the quality of feedback given by consultants and received by registrars

With regard to consultants, Black consultants were not affected by the race, gender or ethnicity of the registrars when they gave feedback to them, as compared to consultants of other race groups ($p<0.05$). Indian consultants, unlike their African or White colleagues, gave significantly more specific feedback about how to be an effective communicator (a graduate competency outcome) ($p<0.02$), and reported more significantly that they were proficient at giving feedback to registrars ($p<0.02$). No statistically significant relationship was observed between any of the individual items and race groups for registrars.

Consultants noted, with respect to the effect of race on providing it, that feedback "Improves learning and communication", and that "It is important to remain unbiased and objective". The benefits of feedback as a whole were noted by registrars and, regardless of race, they thought that "Feedback was not personal, it is given in a constructive manner" and "Feedback by my consultants is always received in a good way".

Discussion

It is noted that students from previously disadvantaged backgrounds generally report feeling marginalized and exposed to conflict within academic settings (Badat 2016, Daniel 2007). The multicultural, heterogeneous setting of this medical school would indicate an increased need to understand the contextual factors, especially those of a demographic nature, that affect such students. A deeper understanding will allow for greater insight into exactly what the issues of importance are, be they a lack of cultural sensitivity, language barriers, latent racism or sexism, and allow for implementation of appropriate corrective measures to rectify the prevailing problems. At present, it would appear that the call for curriculum transformation underpin many of the factors identified as elemental in hindering feedback. Suellen Shay, Dean and Associate Professor of the University of Cape Town's Centre for Higher Education Development, writing in the Daily News section of the University's website on the 13th of June 2016, examined and synthesised the call for a revised curriculum, noting that transformation would engender a better 'fit', both in terms of the population that undergraduates are drawn from, as well

as the better preparation of graduates for their future work world, be it in first, world hi-tech medicine or among rural poor. However, as Harry Garuba noted in a Mail and Guardian article on February 27 2015 , curricular reform needs to considered as more than just inserting certain items into an existing structure, but should be examined closely as to whether a complete overhaul is needed.

The effect of gender on the provision of feedback was noted in the perception of male consultants in this study that their feedback sessions were always successful. This may be due to the fact that the power differences that exist between the sexes, that is evident in general conversation can also lead to the disempowerment of women in supervision. Female consultants are more likely to defer to their male colleagues, and in turn their subordinates, as a result of their own training experiences (Davis and Allison 2013, Nelson and Holloway 1990). Despite being correct, women often do not assert their rightful position of being the expert. Male registrars felt overall that the feedback they received was of good quality as compared to females. They also felt strongly positive about different individual aspects, and that sessions were always successful – so strongly that they would use similar techniques with their own students. They reported feeling motivated to improve their performance, as compared to female registrars who reacted according to whether the feedback was perceived as positive or negative criticism. Although female gender has been generally cited as a predictor for success in more affluent Western communities (Ferguson, James and Madeley 2002), the subordinate position of women (Davis and Allison 2013, Nelson and Holloway 1990) can account for these statistically significant results of the more positive perceptions of male versus female registrars in reporting on their experience of feedback. While internationally the numbers of women entering the medical field are increasing, there is still a disparity in their representation throughout, as well as in the higher echelons of the profession (Kilminster et al. 2007) which may be attributed to their greater willingness to sacrifice their aspirations as compared to their male colleagues (Drinkwater, Tully and Dornan 2008). Conflicting evidence is presented about females and feedback in the literature. Whilst some studies report that female students are more active in seeking out feedback (DeLima Thomas and Arnold 2011), others report that they are not encouraged to do so in training situations (Rose, Rukstalis and Schuckit 2005). Despite males being reported

as less likely to seek feedback, Lee et al. (2009) note that males are more assertive in their language, and so this may account for the positive provision of feedback when they actually do engage in the process. This supports the positive findings regarding male registrars in this study. However, the factors that impacted on why more female students did not report a better feedback process need to be examined more closely in future studies. This could very well be in keeping with the present construct that supports the call for a 'decolonised' system – namely one that does not support a white, male, heterosexual dominated student body and graduate population. Such unpacking of the existing paradigm will facilitate a better understanding of the dynamics and inform the necessary corrective measures that need to be implemented.

With regard to the effect of language, we found that consultants who were first language English speakers gave better feedback about how to be a communicator and a collaborator. Since communication can be one of the most useful tools at a clinician's disposal, it is vital that registrars be well-trained in this skill (Brindley et al. 2014). Singh et al. (2013) report that the ability to communicate well is one of the most highly rated qualities of effective medical teachers. It can be inferred from the findings of this study that consultants proficient in English took greater pains to give feedback about communication, possibly to improve deficiencies that they observed in registrars who were second language English speakers. This conclusion was supported by these registrars, who reported more positively on the various elements that they received feedback about. Registrars noted the impact that this had on improving their development and interactions with patients. The reason for this could be attributed to the fact that consultants made great efforts to ensure that the 'message transmitted' to those registrars who were being instructed in a language that was not their home language was clearly 'received and understood'.

In terms of age, this study found that in consultants, age was positively correlated with provision of feedback. Older consultants reported providing better feedback overall. Both consultants and registrars in this study felt that feedback from a more senior, experienced, consultant held in high esteem carried more weight than a junior consultant who was less well respected. If one equates age with experience this would support the finding that

older consultants gave better feedback. Older consultants have both professional and personal expertise and experience that can shape the feedback process (Rose, Rukstalis and Schuckit 2005). However, it has been found that academic trainees, who were less experienced, nonetheless gave more comprehensive feedback based on holistic principles as compared to consultants. This could have been due to their familiarity with the academic subject material (Fernando et al. 2008).

Registrars in the first year of training had an overall better experience of feedback as compared to more senior registrars. These results are surprising in that they differ from the maturational effect one would expect with year of discipline (Murdoch-Eaton 2012). Perhaps consultants believe that novices to training require more 'handholding', in keeping with the paradigm of the 'see one, do one, teach one' approach to training prevalent in medical schools, and so take greater pains in providing feedback to these novices. This approach would be counter-intuitive to developing clinical competence, as registrars closer to the end of their training and approaching independent practice require just as much, if not more, feedback. While consultants might think that older registrars who are more experienced require less feedback, therefore providing less, it might be that these registrars are more complacent and less likely to report more positively on their experiences. Senior registrars reported that they received intermittent feedback and the heavy clinical workload they had to bear impacted on the time they had for studying and to reflect on feedback (McQueen et al. 2016, Shrivastava, Shrivastava and Ramasamy 2014, Cantillion and Sargeant 2008).

The study findings showed that consultants of race groups other than African appear to be more affected by the race of the registrar in providing feedback than is the case with African consultants. Supervision of residents is a responsibility of faculty that, ideally, should occur in a non-partisan manner (Rose, Rukstalis and Schuckit 2005) and provision of feedback should not be dependent on race. This finding would support the hypothesis that race is a factor in effective supervision, with the novice being drawn to a consultant of the same race and vice versa (Rose, Rukstalis and Schuckit 2005, Daniel 2007). In addition, this supports the findings of other studies, that the barriers that students of colour experience in achieving academic success can be due to lack of support, in particular,

when encountering insensitive consultants (Odom et al. 2007). It could be argued that consultants from other race groups were more cognisant of the race of the registrars because of sensitivities to being labelled racist, whereas African consultants did not share these same concerns and so were less at pains to be politically correct. Hence, regardless of the reasons, either favourable or not, for this perceived racial bias, measures should be implemented to ensure that the clinical teaching environment is a non-racial one. However, the study also found that consultants did try to remain unbiased and objective when providing feedback. This is encouraging and needs to be further supported in multicultural environments.

The apprenticeship model of clinical medical education implies that feedback should occur equally in all disciplines. This was not evident in the findings of this study. Registrars in Surgery reported statistically more significant scores regarding the quality of feedback provided by consultants. This may be attributed to the nature of the discipline. Surgery requires more extensive and immediate feedback, as well as facilitated feedback, which occurs in the operating theatres. All modalities of feedback – immediate, brief, informal and formal (Branch and Paranjape, 2002, DeLima Thomas and Arnold 2011) – appeared to be incorporated, which may account for this finding. Registrars' comments supported the finding that feedback in the discipline was excellent. Despite these positive reports, it must be noted that these registrars also reported that feedback given did not encourage reflection, a key competence for lifelong, self-directed learning and that they would not use their consultants' techniques with their own students. Therefore, while the teaching in the department appeared to be excellent and result orientated, there also appeared to be potential flaws within the process that would warrant further investigation to make the overall process more holistic and comprehensive.

Conclusion

Relationships between demographics and certain important aspects of the provision of feedback were observed at this institution which can impact on the context in which feedback is given and received. The effects of race, particularly in relation to underrepresented minorities and previously disadvantaged groups, have been cited as a barrier to achieving academic and professional success. One way to overcome this is to

ensure that these students are provided with adequate mentorship that ensures proper feedback processes. Within the proposed context of a 'decolonised' and 'deracialised' syllabus and taking into the account the equity, rather than the equality, of the different academic needs of such students, appropriate academic support programmes should be implemented that prepare and equip ethnically diverse students to provide care for equally diverse populations. Such a transformation of curricula would extend beyond just counting the numbers of white and black students and professors to meet targets. Garuba (2015) argues that 'decolonising' both undergraduate and postgraduate medical education would call for more than mere re-writing of content, but rather learning from prior lessons of transformation and building on existing foundations to incorporate new modalities of teaching, for example, the integration of traditional and herbal remedies into conventional evidence-based medicine (Zhang, 2011). The advantage of such innovations would be to legitimise this traditional knowledge so that it is not lost to future generations, as well as serving to add on to the gold standard that has come from Western knowledge, improving its relevance to the local patient population, thereby contributing to how syllabi can be 'decolonised'.

Another important aspect these support programmes should address is the issue of language, and the medium of instruction, taking care to ensure that the message 'transmitted' is not lost in the 'reception' because of common misunderstandings. The perception that feedback is not being adequately provided, may be an erroneous one and more simply due to the fact that feedback is not recognised as such when it is given. Students need to be made more clearly aware that they are indeed receiving feedback, be it brief, informal or formal. This process needs to begin in their undergraduate years.

Gender discrimination still exists, even though there are more women entering the medical work force now than in the past, and can be seen in how female doctors perceive themselves and their roles. Female registrars should be empowered to ask for appropriate feedback and the consultants to provide it.

The factor of age and, hence, experience of consultants was positively correlated, in that older consultants were seen to provide better quality feedback. In-service education and

training should be provided to ensure that both junior and senior consultants are good teachers, as well as competent clinicians, and are best able to provide the feedback required. These updated training programmes should enshrine "Best Practices" from those disciplines that are practising good feedback, and advocate for delivery within an acceptable framework, for example, as elaborated upon by Nicol and Macfarlane-Dick (2006), together with a clear, synthesized operational definition of feedback.

The conclusions and recommendations of this study thus support a more libertarian approach to the revised process of feedback as it is presently practised, where the consciousness of students is raised so that they are not only more critically engaged with their subject material as entrenched in the curriculum, but that they also lend their voices to the process. This would address how the concerns of students can most readily be heard. While academics may fear this involvement in the governance of the university, it would serve as a means to keep the misuse of power by academics in check, by allowing students a forum to voice legitimate grievances (Shay, 2016). These changes should also encompass changes in admission and assessment criteria that are a reflection of present societal inequities. Hence, we move beyond token changes that 'decolonisation' alone may result in, into the 'disorienting dilemmas' that ultimately result in transformation (Mezirow, 1997).

While the limitations of this study were the small sample size and single setting, making it difficult to generalise, the findings nonetheless have relevance for this university setting and other such multicultural settings. Future studies should focus on more in-depth interviews with individuals to explore further some of the sensitive race, gender and language issues highlighted in this study.

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Effects of Demographic factors on provision of feedback in clinical teaching in postgraduate medical education

CHAPTER 5: REPORTING ON THE PERCEPTIONS OF FEEDBACK IN POSTGRADUATE CLINICAL TRAINING: A QUALITATIVE ANALYSIS OF THE ACTORS, PROCESSES, CONTEXT AND CONTENT
(MANUSCRIPT IN REVIEW: *BMC MEDICAL EDUCATION ONLINE)*

The process of giving feedback unfolds within a specific context and that has bearing on the content as the roles of the multiple actors, or key stakeholders. In this chapter, a qualitative thematic analysis was made of the responses of six Clinical Training Heads regarding their responses to the overall reported dissatisfaction with the process of feedback at this institution. The impediments hindering current practice as well as recommendations for improvements were explored.

Reporting on the perceptions of feedback in postgraduate clinical training: A qualitative analysis of the actors, processes, context and content

Abstract

Background: The clinical experiential setting would appear to be the ideal setting for the transfer of skills from the novice to the expert. However, the ever-changing needs of patient populations requires medical curricula to be equally responsive in the methods that they employ to ensure the production of competent and responsive physicians and move beyond the paradigm of 'see one, do one, teach, one'. Provision of feedback is the cornerstone of such improved methods, but it is not always easy for medical educators to provide adequate feedback to postgraduate registrars in training, especially since clinicians are not trained as teachers. Multiple challenges impact on giving and receiving feedback within the clinical training platform. Previous studies cite logistical issues such as heavy clinical workloads, as well as contextual factors such as racial and language barriers. This study sought to examine the perceptions of Clinical Training Heads at a large multicultural institution around the provision of feedback and to explore recommendations for improvements in the future.

Methods: Two previous studies conducted at this institution found that there was an overall dissatisfaction with the quality and quantity of feedback. Semi-structured interviews were conducted with six Clinical Training Heads in order to examine the reasons for this impression, and what their suggestions for improvement were. Using the Walt and Gilson (1994) framework, a thematic factor analysis was made of the responses with regards to the process, context and content of feedback, as well as the actors involved.

Results: The Clinical Training Heads agreed on the importance of feedback as an integral means to enhance clinical competence. They cited the lack of an overall guiding framework, multiple governing bodies of registrars, heavy clinical workloads and a lack of training in provision of feedback as reasons for impediments to the process. Language barriers and registrars' commitment were also given as reasons.

Conclusions: Feedback needs to be made part of the university culture. In-service education and training for registrars and consultants is necessary to improve giving and

receiving of feedback. Monitoring and evaluation through the implementation of a supervising Committee was recommended.

Key words: Feedback; postgraduate medical training; clinical competencies; registrars

Background

Physicians need to be competent enough to respond adequately to complex clinical situations so as to achieve the best possible outcomes for their patients. This is especially true of physicians in private practice without immediate recourse to the advice or guidance of more experienced seniors [1-3]. Various models have been adopted in medical education to achieve such competencies. The traditional time-based approach allows a registrar to 'steep' in a programme for a fixed period of time, almost as if to imbibe the required competencies through observation or osmosis. A more modern twist, leads to the production of an 'i-Doc': a term borrowed from modern technology to describe a physician that is adept at adapting to the unique demands of each patient [4]. Whichever training modality is chosen, one of the important processes underpinning the teaching that will result in successful outcomes – namely, competent physicians – is feedback [5]. Registrars in training should receive in advance the pre-determined standards that they should be achieving. Their performance should be directly observed by a senior, and any deviation from the desired standard should be brought to the registrars' attention, together with a plan for improvement [6]. Despite an abundance of literature recognising how crucial and critical the process of feedback is to medical education, clinical competence and professional performance [7-10], many papers report the challenges and barriers to successful, high-quality feedback [1, 9, 11-13].

Multiple factors appear to impact on the giving and receiving of feedback, ranging from the feedback-seeking behavior of students, the capacity of supervisors to provide feedback and the environment within which feedback is given. Students value feedback [14], although they report dissatisfaction with the perceived quality of the feedback provided [11-15]. They prefer compliments rather than constructive criticism, which may be seen as negative [16]. Hence, supervisors are reluctant to provide what may be perceived as negative feedback for fear of damaging personal relationships, causing adverse psychological trauma, or even facing litigation [1, 14, 17]. The manner in which feedback is given also impacts on how it is received. Shrivastava et al. [10] report that students shy away from insults given in a derogatory fashion, and are less likely to participate in the learning process, especially in medical schools where the medium of instruction is not the registrar's home language. The gender and personality traits of the

registrar also affect feedback -seeking behaviour, with female students and high achievers more likely to actively seek out feedback than males and average or low achievers [18]. The location and timing of giving feedback may also be problematic. Heavy workloads mean that service delivery demands often take precedence over bedside teaching, even brief and informal feedback [9, 19]. If the setting is noisy, for example the Accident and Emergency Department, this external noise may interfere with the feedback being understood in its entirety [13], but if delayed, so that it may be given in a more appropriate setting, the message, especially for procedural skills, may be not be communicated effectively [20]. The challenges highlighted above may further be compounded as in most settings the clinicians have generally not been taught how to teach [21]. Thus they may be inadequately equipped to transfer the necessary skills. In addition, they are often frustrated by what appears to be the limited impact on learning following feedback [22]. This may be attributed to the lack of a culture of giving and receiving feedback in the postgraduate clinical learning platforms.

Medical education is constantly evolving and striving to achieve excellence in the training of physicians. As far back as the turn of the century, clinical leaders like William Osler and Harvey Cushing made scientific research the basis for clinical medicine, while the Flexner Report of 1910 highlighted the need for standardization and integration of medical curricula, leading to life expectancy doubling as a result of increased sensitivity to patient needs [23, 24]. A century after the Flexner report was released, Irby et al. [25] re-examined these themes and solidified an approach to achieving further competencies, in the light of 21st century challenges, but noted that implementation of the recommendations made requires a dedicated effort of all those involved in curricula reform. Skochelak [26] drew a similar conclusion: in reviewing a decade of policies calling for reform in medical education in the United States of America and Canada. She noted that the recommendations for improvements are sound, but that strong accountability of the leadership of institutions is required to achieve it. When such policies are reviewed and implemented, and presented in the form of written guidelines, be they clinical or didactic, [27] improvements are seen in the output of medical schools, namely competent physicians, better health outcomes for patients as well as international recognition of the training programmes [28, 29]. Therefore, the problem appears not in

what to do, but in translating this into viable policy that can be implemented. Buse et al. [30 p6] define policy as embracing "courses of action (and inaction) that affect the set of institutions, organizations, services and funding arrangements of the health system". However, while the term 'policy' is widely used, it is often misunderstood, more so, since the use of the term is often dependent on where and how it is used [31]. The process of policy-making itself is also difficult: There is often a lack of transparency by different stakeholders, and difficulty either in obtaining relevant documents and papers. The converse might also apply, with too much information that requires analysis being available [32]. In order to circumvent these difficulties, Walt and Gilson [32] propose a methodology that involves a triangular framework which includes the actors, context and process, all of which affect the policy-making process, as well as the content of the policy itself. Context is the environment within which the intervention is to be implemented, and is affected by both internal and external factors while content refers to the policy to be developed, and what it is being developed for and about [33]. The actors are those individuals or organisations that are responsible for developing and implementing the policies, as well as those who will ultimately influence the practice of the policy [34]. The process is how the policy is made, beginning with the identification of the problem, to the formulation of the policy, its implementation, monitoring and evaluation. This aspect of the framework allows for a greater incorporation of various factors, including thematic analysis of qualitative data that is increasingly being called for in policy development [35]. The Walt and Gilson [32] framework is an attempt to compensate for the shortcomings of previous, more linear, models, allowing for better identification of all the different elements that influence policy-making, while still allowing for examination of how they interact with each other. The framework has stood the test of time since its development in 1994, and has been implemented in multiple countries for different purposes [33].

In order to determine how best to develop a policy about improving the mechanism of feedback at a multi-cultural medical school, given the multiple barriers to an effective feedback process, a study was designed to collect data on the perceptions about the feedback process and to report on the findings. Hence, this study aims to elicit responses from key stakeholders in the clinical disciplines by reporting back to them on the

perceptions of the responses received from the registrars and consultants in the respective disciplines, about feedback they had received and given respectively. The Walt and Gilson [32] framework was adopted as the contextual framework for this study. This allowed for examination of the context and process that simultaneously impact on delivery of content, as well as the relationships between each of these factors [36]. This study explores the various factors related to the actors, context and process to develop policy guidelines relevant to postgraduate medical training in multi-cultural clinical settings related to the practice of providing and receiving feedback in clinical teaching.

Methods

A qualitative methodology was adopted for this study, in order to evaluate in depth and detail the factors posited for discussion [37]. In order to describe and reflect on the concepts for further explanation and clarification, semi-structured interviews were conducted with six Clinical Training Heads. This purposive sampling was based on the fact that these disciplines comprised the six major clinical disciplines. Two studies had been conducted to determine the perceptions of registrars and consultants regarding the quality of feedback provided within the clinical teaching environment of the institution (including a definition of feedback synthesised from the literature) [11, 12]. The results of these studies were emailed to all the Clinical Training Heads prior to the interviews. The purpose of the interview was to explore their views about the findings related to an overall unsatisfactory quality of feedback given and received in their clinical disciplines. Suggestions and recommendations to enhance the culture of feedback and improve the postgraduate training were also explored related to the content, context, process as well as the actors [32] in this learning environment. Interviews were recorded, with consent, transcribed verbatim and the data was anonymised.

A content factor analysis, based on constructivist theory [38], of the transcripts was undertaken. This involved immersion in data, reading and re-reading until themes and sub-themes were identified based on the Walt and Gilson [32] framework. As illustrated in Figure 1, each apex represents one of the elements that affect the policy making process, namely, context, content and process, as defined earlier, with the actors in the

middle. The diagram represents how the contribution of each element can be analysed separately, but also reflects their interconnectivity.
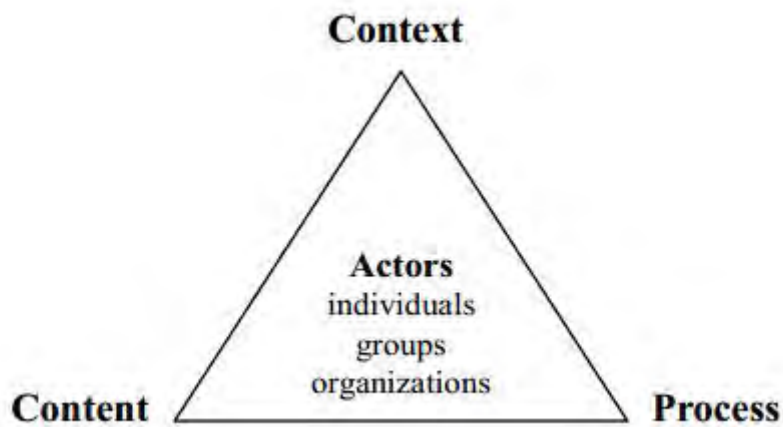
Figure 1: Policy analysis triangle. Source: Walt and Gilson [32, p354]

After several discussions, consensus on these sub-themes was reached by both researchers (CB and VSS).

Results

Data was coded under these main themes, with sub-themes under each of these main headings identified, as presented in Table 1.

Table 1: Themes and Sub-themes based on the Walt and Gilson Model [32, p354]

Theme	Sub-theme

Context	Disciplines in agreement with importance of findings
	
	Barriers to providing feedback:
	
	    - no overarching policy
	
	    - multiple structures governing registrars
	
	    - heavy clinical workload with decreased staff
	
	    - language barriers and cultural mindsets

Content	Logbooks:
	
	    - 'tickbooks'
	
	    - evaluation rather than feedback

Process	Impediments:
	
	    - lack of awareness
	
	    - poor standardisation
	
	Improvements:
	
	    - vision to guide policy
	
	    - improve communication
	
	    - build capacity
	
	    - 'red flagging' of registrars
	
	    - better overall supervision

Actors	Individuals:
	
	  Consultants:
	
	    - lack of capacity
	
	    - decreased awareness of processes
	
	  Registrars
	
	    - perceived calibre
	
	    - improved qualifications prior to intake
	
	Disciplines:
	
	    -adherence to elements
	Organisations:
	
	University, Department of Health, Colleges of Medicine of South Africa:
	
	    - clear delineation of responsibilities

Context

Factors relating to the current environment in which feedback was given were explored.

Importance of feedback

All the senior clinical participants agreed that feedback was an important component of postgraduate clinical education. It was noted that:

> *"It [feedback] is absolutely important, I think it's critical. The aim is for the teacher to disseminate his knowledge, and the student to acquire and retain that knowledge."*

> *"The registrars must be critiqued, almost on a daily basis. Positive criticism… deficiencies must be ironed out, brought to their attention, in a positive way."*

Barriers to feedback

Despite acknowledging this importance, the Heads also agreed that proper feedback was not occurring. They felt that the context in which teaching took place presented with multiple barriers to successful provision of feedback, starting with a lack of overall guidance: there were neither policies nor guidelines in place regarding how feedback should be given nor how postgraduate matters could be channeled to a centralised office or portfolio. They pointed out that the university leadership was remiss in not instituting such standardised procedures:

> *"How do you implement best practice and good practice if it's not officially formalised, implemented, adopted, by the whole medical school?"*

This was compounded by the tri-partite management of registrars since contractual obligations of the registrars to the Department of Health (DoH) – the paymaster – meant that clinical service delivery to patients by registrars took precedence over teaching. The final exit examination was administered by the Colleges of Medicine of South Africa (CMSA), while oversight of the Master of Medicine dissertation, a necessary requirement in order to sit the examination was a university function. These different offices did not always communicate effectively with one another, which meant that registrars could often sit for and pass the examination without necessarily having developed the critical competencies. Appropriate checks and balances to ensure due process had been followed may have been bypassed, as illustrated by one of the seniors below.

> *"There is no mechanism and that's my worry again, you see when, in the past the gatekeepers would be the senior members of the department and the head could tell you, 'Listen here, after your four years of training, I don't really think you are ready to write, spend another six more months or so and then you write.' There is nothing in place now, so the guy [registrar] writes to the college, he says, 'Listen, now I've done three years of my training' and the college will say, 'Okay you are eligible to write.'"*

Another major challenge was the heavy service delivery workloads of the consultants and registrars due to human resource constraints in the public health sector. This left very little or no protected time for teaching and feedback:

> *"...you've got to have personnel and that is sufficient consultants and sufficient senior members. At the present moment it's a major challenge in the sense that if you're running units and running our clinics, be it either surgical or outpatient, the number of patients we are seeing is basically being shared among consultants, registrars and even medical officers...put it this way, the registrar who is supposed to be supervised by a consultant is now working on his own and when he identifies problems then he seeks help from the consultant. In the ideal the consultant should be like a free individual moving around and obviously assessing the individual who is with the patient and at the same time assisting the individual when he wants help. But we are not seeing it like that. The consultants are basically functioning as registrars now."*

This lack of capacity was exacerbated by satellite teaching campuses which made it difficult to distribute expert consultant supervision equitably, as well as the "brain drain" caused by consultants emigrating or leaving academia for private practice:

> *"Before the ink has dried on the certificate…they are going into private practice. The majority of the individuals that come in to train are not down here to give us continuity of service, we know that. In fact, they are here to get their examination and then they're out in the private sector. We can't retain staff."*

Generally, more experienced staff that had been at the institution for longer periods had a wide range of exposures to different clinical settings and scenarios and would then be

able to share such valuable learning. The Clinical Training Heads felt that consultants who had fewer years of experience were less equipped to train registrars, but they were unable to retain experienced staff who could mentor and train registrars:

> *"... the more senior the person is and the more experienced they are in academia, the transfer of skill seems to be much easier or much more efficient, as compared to somebody who is less experienced as a consultant. How many of the consultants here really have ten years or more experience?"*

Language barriers also negatively influenced uptake of feedback as it seems that registrars who were English second language speakers had more difficulties in understanding as well as expressing themselves:

> *"For the registrars that went to Umgungundlovu High School [a poorly equipped, government funded high school, where the medium of instruction was an indigenous language], language is a problem, language is a barrier, language is a fortress."*

Other factors also impacted on teaching, such as male registrars not wanting to be supervised by female consultants:

> *"It is a problem, you know. Sometimes, they [male registrars] have their own cultural things, you know, they are misogynistic, they don't like working with females. They don't like taking instructions from females."*

Content

The Clinical Training Heads described what the feedback process consisted of at the time of data collection.

Logbooks

In order to sit the final exit examination of the CMSA, registrars need to demonstrate evidence of competence by means of logbooks or portfolios of evidence. These are a record of the procedures that they had successfully performed during their training period. For the Clinical Training Heads, logbooks appeared to be a proxy reflection of how feedback was provided by consultants, and discussion focused on the issues with

appropriate implementation of the logbook feedback process. The majority of the participants felt that the logbook had become more an evaluation tool rather than being used to give feedback about competencies achieved. Further, they perceived it as an inaccurate reflection of how clinically competent the registrar was:

> *"The logbook is something that's supposed to be overseen by the head or by the senior members of the department. It's very difficult when I mark a logbook to say that hey, these procedures here have truly been done by this individual. I take it on face value that they are done."*

The validity of the logbook was also called into question, and it appeared that it was regarded as a mere 'tickbox' of activities done, not an indication of how well such activities were performed, as illustrated below.

> *"No, it's actually a 'tickbox' just to confirm, it's bureaucracy. Okay so they [consultants] can say, "We've done the six monthly assessment."*

Process

Process refers to how feedback was given. Participants shared what they considered were barriers to proper feedback being given, as well as highlighted their vision for improvements.

Impediments

Participants highlighted impediments to the process of feedback within their disciplines. A lack of appropriate supervision and monitoring of feedback for clinical work, exam preparation or dissertation supervision was reported. There appeared to be no standardised process when consultants did give feedback:

> *"There's supposed to be ...but there's no monitoring of it right now."*

In addition, there appeared to be a lack of awareness among consultants on how feedback was ideally supposed to be given:

> *"And sometimes consultants will just feel, 'No I'm a nice person, I don't want to hurt this person's feelings. I'll give them a good rating', sort of thing. That maybe does happen, but it shouldn't."*

Improvements

With regards to improving present practices, the Clinical Training Heads made several suggestions. They indicated that they would attempt to improve communication processes to determine the needs of the registrars, change their teaching styles, and engage more with registrars:

> *"It should be an open communication up front, from the beginning of the rotation, during the rotation, that there is this open communication where the registrar is free to say, 'This is what I would like out of this, and you know, I would like more sort of questions to be directed to me. I don't want this just to be a service delivery, this thing.'"*

This would allow for 'red flagging' of registrars who were not achieving the desired standard, and enable more intense mentoring, to ensure better through-put.

Academic days that were more structured, better supervision of research, greater emphasis on examination preparation and the need for protected teaching time were also mechanisms for improvement that were highlighted:

> *"Registrars are there to be trained. We need to think about what the needs are for the service, in order to identify which registrars should be trained, and that it is a time of training, it's not only a time of service. Obviously they do a lot of service delivery, but there must be protected time."*

In addition, consultants would be made more aware of how to give more standardised ratings to registrars:

> *"So that is what we're trying to implement now, is that the post graduate meetings which are held like every two to three months, where all the consultants get together, is to actually, you know, to bring this awareness to the consultants, that … we are evaluating their ratings."*

Overarching these interventions, the desire for a clear, university-wide vision and mission regarding a teaching ethos was also emphasised:

> *"What we should do is establish what is our vision and our mission for teaching postgraduates, we share this vision, we all agree that this is how a registrar*

should be taught, this is how we should be giving them feedback, etc., etc. But it's got to be something that is not just within our department, it must be part of the wider medical school. This should be documented so that everybody is clear in terms of what the requirements and responsibilities are for both parties."

Actors

All key stakeholders involved in the training of registrars are actors in the feedback process.

Consultants

The Clinical Training Heads were aware of the shortcomings of consultants in giving feedback, since consultants are not trained to teach:

"Unfortunately most clinicians have not been trained…So you know the good surgeon, the good psychiatrist, the good obstetrician, they're just doing their work and not kind of voicing or formalising the teaching element in what they're doing. And so [the consultant] just assumes that the registrar is on the same level and [the registrar] kind of infers that this is how things should be done."

Registrars

Participants also felt that registrars were not active in seeking out feedback, showed no enthusiasm, drive, vigor, or hunger to learn and that this apathy further weakened the process:

"I think they're very passive learners. And as I said from my own experiences, even when you put into place structures for their learning opportunities and feedback, they shy away from them, they don't try them."

Consultants were not spurred on to give better feedback, and often felt frustrated when effort that they did put in was ignored:

"As much as they complain that they don't get feedback, when it's offered to them they don't take up on it, but they're quite happy to do things where it's convenient for them and get by, bypass established structures. So once again you

can complain, but you also have to kind of rise to the occasion when there are
situations, you know, opportunities for you to train.”

Consultants felt that the entry criteria into the registrar training programme should be more stringent, and based on prior qualifications and experience within the discipline, since such exposure would better equip the registrar to cope with the demands of training:

“… it's very difficult if you take somebody post maybe graduation in terms of the
two years of internship and the year of their community service and then suddenly
put them in as a registrar to function.”

Disciplines

When representatives from each discipline described how feedback was given, only one discipline appeared to adhere to all the elements of the feedback process, with direct observation of performance together with a plan to improve deficiencies. This Clinical Training Head explained:

“I am not an educationalist but this is common sense, I saw where my deficits
were in our training. We are ... investing in them, we are giving them guidelines,
we are giving them mentorship in a genuine manner and it cost me, I am not sitting
in an ivory tower. Today I was in theatre holding their hands which is a glorified
feedback. We know about the operation, I am taking you through it, you start, I
am here, you did this wrong. Next time don't do this. You call it feedback, I call it
common sense. This is how we have always done it.”

He was aware of the need to lead from the front and so was an exemplary role model:

“...you have to be cognisant of the training. I read all the time so I have to be one
step ahead of them.”

Organisations

Clinicians felt that there should be clearer lines of responsibility for registrar training, determining exit competencies and service delivery responsibilities. The lack of a clear oversight body meant that even if a registrar may have not achieved clinical competency, due to completion of the contract with the DoH, they could no longer be employed. Most of the participants felt that in order not to penalise the registrar, they allowed them to write the examinations:

> *"Because we have this unique situation, they are employed by DoH, the four-year training programme is with the university, but their exit exams are at the College of Medicine… The university hasn't told us clearly what happens if they fail to meet the requirements of that semester. Ideally you should be made to repeat the semester like any other semester. But it's not clear because they have a four-year contract with the DoH, so if you make them repeat a semester that has implications for DoH."*

Discussion

It is important that medical educators recognise the need to respond to changing educational and training imperatives for both undergraduate and postgraduate students [28]. The recommendations of the Flexner report, as far back as 1910, led to a more standardised, albeit more expensive, medical curricula that resulted in decreased population morbidity and mortality because of better trained doctors [39]. A century later, Frenk and 20 other leading academics came together to address the crisis of a medical curriculum that globally was static, outdated and no longer responsive to the changing health needs of the 21st century [40]. Using a multi-professional, systems approach the Commission developed a framework for institutional strategies to improve professional education [41]. However, despite this and numerous other such initiatives, the issue lies not with merely knowing what to do in order to effect transformational change, but rather how best to implement recommendations, policies and guidelines [26]. A concerted effort and complex discussion at multiple levels of governance are required, in order to achieve consistency [28, 29]. The findings of this study, intended to guide the policy development of feedback as an institutionalised 'Best Practice', would appear to concur, given the

complex nature of the interaction between the different stakeholders situated within the current context.

Mays et al. [35] highlight the advantages of undertaking a qualitative thematic analysis to inform policy development. With this in mind, and using the policy framework developed by Walt and Gilson [32] in which contextual, process and content issues together with the actors involved are examined, the responses of the Clinical Training Heads of the six final-year disciplines were analysed regarding feedback practices, and the interventions they hoped to implement in order to bring about meaningful change [32]. However, even though this model is an attempt to move away from a simple linear structure, it remains difficult to separate the different issues completely, for example context is influenced by process and vice-versa. It must therefore be borne in mind that the discussion that follows should not always isolate the different themes completely, but acknowledge where they do impact upon one another. This is a truer reflection of the policy-making process, and more likely to lead to a more detailed and in-depth policy.

In keeping with other studies [20, 41-43], the current study showed that all the participants agreed on the critical importance of feedback as a means to enhance clinical competence in registrars. However, the context in which feedback was given was seen as a barrier to the process. The lack of a clear operational university-wide definition of feedback, for example, as proposed by van de Ridder et al. [43], together with a suitable framework [44, 45] within which it could be delivered, meant that , instead of being formalised and structured, the process was very much left to individual practice. The importance of feedback was acknowledged by the participants. The next important step to be taken in improving the mechanism of feedback was that the practice needed to be viewed as an everyday occurrence [17], and made part of the university culture [46]. Therefore, appropriate governance structures would need to be institutionalised, so that a systematic approach could be implemented. In this way, the quality of feedback would not differ between disciplines and departments, depending on the approach or varying skill levels of different consultants.

Registrars are entitled to good feedback practices [10]. Hence, this study highlights the need for a dedicated portfolio to give oversight to postgraduate training at the institution, such as a Postgraduate Committee for Teaching and Learning. This committee should be headed by an Academic Leader for Postgraduate Affairs and have representatives from all disciplines, the registrars as well as the university administration in order to establish coherent postgraduate teaching and learning practice for the university. Such 'ownership' of the process by a committee comprising all disciplines would be advantageous in that it would be more easily adopted and accepted as university practice, rather than being seen as a generic 'top-down' process foisted on already over-worked individuals [29]. Further, representation by all the key stakeholders involved in registrar training on this Committee, would ensure that the 'gatekeeper' oversight body that was felt by the participants to be an integral missing component, would be in place. This would enable facilitation of communication between the administrative, service delivery and training aspects of registrar postgraduate teaching to objectively determine candidates' eligibility to write the exit examination. This 'gatekeeper' oversight body could mean that all components of training were assessed in totality, from the Masters in Medicine dissertation to the completed and assessed portfolios of evidence, and determine if registrars were eligible to sit the examinations, or continue a further period of training to achieve the desired competencies. The committee should also comprise representatives of the DoH so that as the 'employer' of registrars they are aware of the problems that beset the training process identified by the Clinical Training Heads, to this institution [1, 10, 17]. If the DoH was part of such a body, they would then have firsthand knowledge of the barriers to training. Since there is a need for adequate returns on investment in registrar training, namely skilled doctors capable of meeting the health needs of the population [29], negotiations should be undertaken by the university with the DoH for protected teaching time to ensure that the registrars receive adequate training and are not just part of the workforce. Patel [28] in a review of postgraduate medical education in the United Kingdom (UK) points out that standardisation of training processes across the nation as well as an overarching governance body has led to a global recognition of the excellence of UK trained graduates. Similar outcomes for graduates of South African institutions could be achieved through a coherent rationalisation of protected teaching time and administrative processes. In the interim, as a short-term solution, it is

recommended that more creative methods are used in order to maximise all teaching opportunities, for example, improving even brief and informal feedback at the patient's bedside [47]. At the satellite teaching facilities, often manned by less experienced staff, and where the training of registrars could be of a lesser caliber, modern information technology could be employed, be it the use of smart phones or videolinking to facilitate an instant feedback process [48].

The concept of culture, as it related to racial differences, was also a concern for the participants as a reason why feedback was not optimal twenty-two years into South African democracy, citing barriers of language difficulties for English second language speakers, and elements of misogynism. The fundamental right of education may be still tarnished by the historical legacies of apartheid [49], and so it is incumbent upon the institution to establish an environment free from racial or gender bias. Thus, while one should strive for an atmosphere in which race or gender bias is completely absent, this concern raised by the Clinical Training Heads is one that may be surmounted through appropriate programmes focusing on diversity and sensitisation.

Jenkins [50] cites numerous reports of consultants failing to provide adequate feedback to both junior and senior residents during clinical encounters. Therefore, since 2007 a detailed summary or portfolio of evidence has been required by the CMSA, in which a registrar lays out the work completed and his supervisor, and ultimately the Head of Department, signs off on this to state that the registrar has achieved the desired level of competence during the training period. Ideally, work should be reviewed every six months, and performance of procedures observed, so that actual competence may be assessed [50]. Participants noted that while the logbook was advantageous in that it listed all the desired graduate attributes and technical skills, it was the ineffective use of the logbook that was problematic: instead of assessing competencies by directly observing performance in the listed activities, this holistic and comprehensive approach to the portfolio was often not taken. In effect it became a 'tickbox' of only the numbers of activities performed, which would not necessarily indicate competence in the activity itself. In order to improve on this process, which may encourage both reflection as well as formative feedback leading to improvement, more effort needs to be made to

'interrogate' the evidence presented by scheduling regular monthly interviews with the registrars, to discuss the work listed as being done in order to determine the level of competence and identify deficiencies that need to be addressed. During such formal feedback sessions, different models of providing feedback may be employed. One such suggested technique is the 'feedback sandwich' [51] where a positive comment about what the registrar has done well, is followed by suggestions for improvement, and the session is then closed with another positive comment, in a non-threatening, non-derogatory and safe environment. A more technologically advanced variation of the portfolio system would be an e-portfolio, where the evidence is collected electronically and managed by an end-user [52]. e-Portfolios could allow for better tracking of information gathered and indicate deficiencies in competencies to be achieved. Timely remediation may then be undertaken.

All but one of the disciplines appeared to be deficient in providing feedback, attributing the contextual issues discussed above, namely lack of appropriate policies, poor leadership and guidance, staff shortages and heavy workloads as the main reasons. However, it was encouraging to note that the Clinical Training Heads were aware of these shortcomings and had suggestions on how to address the deficiencies. Some suggestions included, regular postgraduate meetings to discuss progress of registrars, particularly 'red flagging' those registrars displaying poor competence and in danger of failing, standardisation of feedback and better supervision of research. In addition, communication between registrars and consultants was also highlighted as an area for improvement, so as to ensure that consultants were better able to provide registrars with the type of feedback that they required. Communication is key in giving effective feedback. Crucial aspects of improving this communication process are that the criteria against which registrars are to be assessed must be known in advance [17], language used must be non-emotive and non-judgmental [10] and the recipient's understanding of the feedback must be confirmed thereafter. Ideally, the feedback given and received must encourage self-reflection of the process in both participants [46]. If improved feedback techniques were situated within a university-wide ethos of improved teaching, in keeping with a mission statement, that also needed to be developed, it could no doubt impact positively on how teaching was received by registrars, and improve competencies.

Disciplines that had developed standards for 'Best Practice': observing practice and improving deviations from the standard to be achieved, through mentorship and hands-on guidance, which called for extra effort in terms of time and dedication, could be invited to discuss how they had overcome the contextual and other barriers that were perceived. An example would be the Clinical Training Head that believed that he had to be a role-model for his consultants and registrars. This practice-based evidence could then underpin policies and protocols around teaching and feedback, and be rolled out to all the other disciplines.

While it is true that, as participants stated, clinicians are not trained to teach, it should be borne in mind that they were registrars at one stage. Hence they are aware, even by virtue of the fact that it was lacking in their own training, what is required of them. However, staff development is recommended for clinical staff so that there may be standardisation of practice leading to diminished variability of feedback [10, 21]. In-service education programmes may be implemented, with the focus not only on the pedagogy of teaching, but on how to give feedback appropriately within a suitable framework [17, 41, 47]. Consultants need to be skilled to use as many opportunities as possible in the resource constrained clinical environments to optimise the teaching and learning process, albeit briefly [47]. Henderson et al. [44] note that teaching of these skills cannot be a single incident, but rather needs an integrated, longitudinal approach – in effect, making feedback and teaching of feedback skills part of the organisational culture, as suggested earlier in this study. Various models, ranging from the 'feedback sandwich' to the behaviour change model, or a method akin to that of breaking bad news exist for giving feedback that have already been well tested, often reflecting consultants' own experiences of receiving feedback [7, 45, 46, 51]. Different innovations may be rolled out, and integrated into every-day teaching. The Mini-Clinical Evaluation Exercise (mini-CEX), which allows consultants to assess clinical skills of registrars and provide timely feedback [53] is one such tool. Another is the One-minute Preceptor, which helps in mitigating the problem of finding time to teach in the busy clinical setting [54].

This study also found that the Clinical Training Heads felt, however, that registrars were apathetic and demotivated and this in turn made them less inclined to give feedback since

students were disinterested in learning. They felt that rather than taking on very inexperienced novices straight into a training programme, in future either more stringent and standardised selection criteria should be applied, or that registrars should have some prior training or have passed an initial, mostly theoretical part of their Fellowship examination. While the calibre of the registrars is an area for concern, especially if they were very young and inexperienced, we would postulate that it is the role of the consultants to inspire through appropriate feedback. They need to see registrars as protégés that they can guide through their careers and impart important attributes to such as professionalism, ethics and medical management. Narciss [55] points out that appropriate feedback can reinforce self-efficacy and motivation of the novice. Further, it is possible that through this process of teaching and motivating apprentices, the consultants themselves can be rejuvenated [56]. While more stringent criteria can be applied as to which registrars are accepted into a training programme, and ideally with some prior qualification in the discipline, this might not always be possible. It should be borne in mind, therefore, that the perceived lack of enthusiasm was not present in the registrar *ab initio*, and instead developed over time as a reaction to frustration with inadequate training. While there might be truth in the view of the participants that the registrars complained when they did not receive feedback, but did not want to work hard: a trend of the 'Millennial Generation' who regard themselves as special [13], the reverse might also be true, that registrars were working hard and felt that they were not receiving anything in return, becoming demotivated as a result. Consultants should therefore endeavour to provide honest, balanced and accurate feedback that will support registrars without demoralising them [20].

Conclusion

In order to improve feedback practices at this institution, a Postgraduate Teaching and Learning Committee comprised of multiple stakeholders should be established. Policy guidelines for improving feedback should be developed in order to standardise feedback practice. These should be drawn from the evidence around current practice and recommendations from this study. The guidelines should also make recommendations for improving engagement with the registrars through interviews regarding their portfolios of evidence and be incorporated into ongoing in-service education and teaching for

consultants so as to build capacity. The university leadership should act on behalf of staff to negotiate protected teaching time, while upholding an organisational culture of feedback.

Limitations

Although this study was undertaken in one academic hospital which may limit the generalisabilty of the findings, the in-depth interviews, with the Clinical Heads who oversee teaching in multiple academic sites attached to the institution, provided insight into the provision of feedback within these settings. Hence, the findings and recommendations of this study regarding the actors, contextual content and process factors impacting on provision of feedback as well as the how the process might be improved may be applicable across training sites. It is recommended that the study be repeated across multiple settings and with a larger sample size in order to increase the power of the study.

Declarations

Ethics approval and consent to participate

Ethical approval for the study was granted by the Humanities and Social Sciences Ethical Committee of the University of KwaZulu-Natal (HSS/1185/013D). Informed consent was obtained from all participants.

Consent for publication

Not applicable

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

CB and VS contributed in conception and design of the study. CB and VS participated in collection, collation and analysis of the data. CB drafted the manuscript. VS contributed to critical revision. The final manuscript was read and approved by CB and VS.

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CHAPTER 6: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

The main study findings and its implications, limitations and future research areas are discussed in this chapter.

6.1. Introduction

The end-goal of medical postgraduate training is the production of competent physicians that can respond efficiently and effectively to the changing health needs of the populations that they serve (Huggan et al. 2012, Jensen et al. 2012, Fluit et al. 2012). Attainment of such competencies can only be achieved if medical education itself does not remain static, but adapts new and better techniques for teaching (Hodges, 2010). One such technique is the process of feedback which has been identified as essential for the improvement in performance of novices undergoing an experiential form of learning in a clinical setting (DeLima Thomas and Arnold 2011, Fluit et al. 2012). Boud (2015) expands on Ende's (1983) definition of feedback in clinical medical education - that feedback was information regarding how registrars had performed - to note that self-reflection should be an important component of this process. The learner should note similarities and deviations from the standard to be obtained, so as to improve performance. These pre-determined standards are thus an important component of the feedback process, since without knowing what and how performance must be achieved, the novice is often left floundering (Boud 2015, Shrivastava, Shrivastava and Ramasamy 2014, DeLima Thomas and Arnold 2012, Cantillon and Sargeant 2008). However, despite recommended guidelines for providing effective feedback, feedback in the clinical training of postgraduate registrars is often omitted or handled improperly (Ende, 1983, Cantillon and Sargeant 2008, Ramani and Krackov 2012). Trainees report a paucity of feedback, and unhappiness with the quality and quantity thereof (Telio, Regehr and Ajjawi 2016, Murdoch-Eaton and Sargeant 2012, Jensen et al. 2012, Sender Liberman et al. 2005), while teachers either report being happy with the quality of feedback provided, (Jensen et al. 2012, Sender Liberman et al. 2005), are unwilling to provide feedback because of lack of training, fear of repercussions, or contextual issues such as heavy workloads (Shrivastava et al. 2014, McQueen et al. 2016).

This study investigated the provision of feedback by consultants to registrars across six disciplines, at a large, multicultural medical training institution. The overall aim was to determine the perceptions of quality of feedback provided and received, as well as the factors that impact on this process, so as to make recommendations for improvement, and

develop policy guidelines that would enhance the culture of feedback in the multicultural setting of the postgraduate clinical training platform.

6.2 Main Findings and Conclusions

6.2.1 What are the perceptions of consultants regarding the feedback they provide?

Chapter Two explored the perceptions of consultants regarding the quality of feedback that they provided to registrars.

While all consultants (n=37) noted that they provided feedback, only some (40%) provided feedback often or always. A key element of the feedback process was missing as standards were not communicated in advance by the majority (62.2%) of the consultants. However, consultants reported that they based their feedback on direct observation of performance (78.4%), provided a plan for improvement (72.9%) and gave feedback on techniques provided correctly (72.9%), but 59.5% did not reinforce correct behavior. Mostly informal feedback was provided (94.6%). Consultants felt that they were non-emotive and non-judgmental when providing feedback (73%), and although the majority reported that they were not influenced by the race or gender of the registrar, 10.8% sometimes were. Only 32.4% noted the effect of feedback on the registrar. There was no consistent feedback provided by consultants on specific skills, or graduate attributes. Consultants who were first language English speakers gave more feedback than consultants who spoke English as a second language about how to be a communicator, especially to registrars who were second language English speakers. Only 46% of the consultants felt that they were proficient at providing feedback.

This study found that the absence of a desired standard of competence to be achieved meant that registrars did not always have a benchmark against which to improve competency. This fundamental flaw in the feedback process at a busy training institution like this one has a detrimental effect on enhancing clinical competency in registrars (Singh et al. 2013, Shrivastava et al. 2014). Trainees cannot always be followed over time in order to see if they have improved. The conventional definition of feedback – 'Feedback Mark 1' (Boud and Molloy 2013b) has always been that performance will be observed and then commented upon by an experienced senior in order to improve

performance. However, in order to move to a variation of feedback that is more practical in the busy clinical setting and bring about the required improvement in performance, the student needs to engage more actively in the task. Part of this process requires the student to know what the desired level of performance is. This is known as 'Feedback Mark 2' (Boud and Molloy 2013a, Boud and Molloy 2013b). Integral to this is the communication in advance of these desired standards to be achieved. Feedback was generally provided informally and infrequently, with the loss of many teaching opportunities. Therefore every opportunity for providing feedback should be maximised (Branch and Paranjape 2002). Consultants were aware of their lack of proficiency in providing feedback, which highlighted the gap with regards to capacitating consultants in how to provide feedback. Consultants required training in how to provide feedback, and to do so in a non-sexist, non-racist manner (Archer 2010). Consultants needed to be more aware that feedback perceived to be negative could have a deleterious emotional effect on registrars. To counteract this, an appropriate plan for improvement had to be provided when feedback was given and provide, or refer for, support when required (Cantillon and Sargeant 2008). If this was not done, registrars would be left floundering and unable to transition to the next level of competence (Sargeant et al. 2008). While this study investigated what the perceptions of those who gave feedback regarding this process was, the 'flip side of the coin' – the perceptions of the registrars, or recipients of feedback also needed to be ascertained. A concurrent scrutiny of the registrars' perceptions of the feedback received was therefore explored.

6.2.2 What are registrars' perceptions of the quality of feedback received?

The registrars' perceptions of the quality of feedback provided was explored in Chapter 3.

Registrars (n= 37) rated the feedback they received poorly with the majority of the registrars reporting that both formal and informal feedback was only sometimes, even rarely, received in all encounters with the consultants (51.3%), standards for assessment were not communicated in advance (51.4%), the feedback received was unacceptable and was not based on concrete observations of performance (51.3%). The registrars scored the proficiency of consultants in providing feedback as unacceptable (64.8%) and

reported that they did not receive feedback on techniques performed incorrectly (54%) nor on techniques performed correctly (67.5%). The intended message was not received by 56.7%, and more than half (54%) did not agree with the content of the feedback. However, majority of registrars reported that when they received feedback, it encouraged self-reflection on their recent performance. A total 43.3% believed that the feedback received was influenced by race, gender or ethnicity, but the majority felt that it was given in non-emotive and non-judgmental language (64.8%). Lack of support structures as well as notice of the effect of feedback on them was also perceived negatively by the majority.

These findings highlighted fundamental deficiencies in the feedback process at this institution, with neither the definition nor key elements being adhered to in the majority of encounters between consultant and registrar. Since feedback is an important tenet in clinical training, in order to rectify deficiencies and cement good performance, this would impact on the ability of the registrars to achieve the desired competencies, through missed opportunities and sub-standard provision of feedback (Boud 2015). Of grave concern was the finding that poor performance went unchecked in the majority of the registrars, a severe indictment on the teaching process, and with potentially dire consequences for health outcomes of patient populations that these future consultants will serve (Barret et al. 2015). A reason for this could be the reluctance of consultants to provide negative feedback for fear of retribution, including legal action, as well as having to cope with the registrars' reactions (DeLima Thomas and Arnold, 2010, McQueen et al 2016). Therefore, appropriate faculty development initiatives, many of which are already in place, should be strengthened, and include training in not only how to deal with the pedagogy of giving feedback, but how to provide emotional support for students should they require it (Steinert et al. 2006). The belief of so many of the registrars that feedback received had overtones of race or gender bias was also cause for concern. Discrimination towards Caucasian males in medical education training was normalised with the Flexner Report of 1910 (Flexner, Pritchet and Henry 1910). While Flexner's aim was to try and standardise medical education, by advocating for the closure of medical schools that were poorly resourced and understaffed, this impacted especially on the so-called Negro medical schools in the United States and globally, as well as perpetuating the notion that women in medical education were unimportant. This view, although dated, persists into

this century, and despite attempts to improve diversity at all medical schools across the echelons (Woolf, Potts and McManus 2011), racial and gender barriers still provide challenges in providing feedback (Harp et al. 2016). Such a situation is untenable, especially in post-apartheid South Africa, and highlights the need for appropriate gender and racism sensitisation training on the part of consultants. An encouraging finding was that registrars, as a result of feedback provided, were reflecting on present performance and methods to improve competency. This was part of the process of the development of self-authorship, with a more mature development of cognition and greater personal responsibility of their actions (Sandars and Jackson, 2015). This boded well for the future development of a life-long love of learning in registrars.

The results of this study, highlighting the discrepancies in perceptions of feedback given and received of consultants and registrars were in keeping with other studies that showed similar findings (Bing You and Trowbridge, 2009, Anderson 2012, Shrivastava et al. 2014) and underscored the need to determine what factors impacted on the provision of good feedback. In order to unpack these facets, within this multicultural heterogeneous teaching environment, further research was undertaken to assess the influences, especially of demographic factors such as age and experience, race, gender, home language and discipline upon the giving and receiving of feedback.

6.2.3 *What is the relationship between demographic factors and the giving and receiving of feedback in a diverse, multicultural setting?*
The relationship between various demographic factors and how feedback was given and received by consultants and registrars was scrutinised in Chapter 4.

Consultants were on average 37.8 years old (range 31–55). The majority of consultants were Indian (27), female (20), had been consultants for less than five years (20) and spoke English as their first language (31), whilst six were speakers of other languages. The mean age of the registrars was 32.3 years (range 27–43). The majority of the registrars were Indian (20) and female (24). Most of the registrars (16) were in their fourth year of Registrar training, 12 were in their third year, seven were in their second year, and two had just commenced training. The effect of age, race, gender, language, year of study and

discipline were examined to see how these factors impacted on the provision and receipt of feedback.

Age did not significantly influence the overall perceptions of the quality of feedback given or received for either consultants or registrars, although the older consultants were perceived to be more experienced and therefore better at providing feedback. No statistically significant relationship was noted between individual variables and race for registrars. Indian consultants, unlike their African or white colleagues, gave significantly more specific feedback about how to be a communicator (a graduate competency outcome) and felt that were proficient at giving feedback to registrars. Male consultants reported being more competent at providing feedback than female consultants, and male registrars reported more favourable outcomes following feedback than did females. Consultants who were first language English speakers gave more feedback about how to be a communicator and a collaborator than consultants who spoke English as a second language. Registrars who were second language English speakers reported statistically significantly more favourably on most of the aspects of the feedback that they received. Surgical consultants reported that they gave better feedback as compared to consultants in the other disciplines, and their registrars concurred, except that they noted they would not use these techniques with their own students. Registrars in the second year of training upwards felt that they did not receive feedback as often or sufficiently, as compared to first year registrars, who reported receiving feedback based on direct observation of performance, that it incorporated a plan for improvement, and that they received adequate support after a session.

The study found that the consultants who were not African were affected more than African consultants by the race of the registrar they were giving feedback to. This is of concern since feedback should be given in a non-partisan manner, and registrars should feel safe within 'decolonialised' and non-racial teaching spaces (Badat 2015). Male consultants and registrars generally had a more favourable opinion of the success of feedback given and received than females. Gender discrimination has been cited as a reason for greater attrition of female students from medical school, as well as unfair representation in positions of power (Harp et al. 2016, Newman et al. 2016), indicating

that female registrars and consultants should be empowered to seek out, as well as provide, feedback more effectively. Although consultants who were English first language speakers (EFL) were at pains to improve the communication skills of registrars who were English second language speakers (ESL) with regards to interviewing patients, possibly due to acknowledging difficulties in communication in a language that was not the registrar's mother tongue, care must be taken to improve all round communication, especially explicit directives that feedback is being provided – and this, to all registrars. The message 'transmitted' must be 'received and understood' (Murdoch-Eaton 2012). Good communication between registrar and consultant also impacts on the ability of both participants to reflect on the process (Ramani and Krackov 2012), which has the long-term benefit of development of personal maturation and cognition (Sandars and Jackson 2015). Senior registrars require just as much, if not more, feedback, as junior registrars. Angus et al. (2015) found that registrars benefitted from milestone-based feedback. This was a form of feedback based on specific development and progression of skills. Hence, as the registrar progressed through training and acquired more skills, feedback on performance had a greater effect than more general feedback when competencies had not yet had a chance to be as developed. Feedback must be provided equally across all the years of training, so as not to disadvantage senior registrars, more especially as they are nearing the end of their training and coming closer to independent practise. Although favourable outcomes were reported for the discipline of Surgery in both giving and receiving feedback, there appeared nonetheless flaws inherent in the process, as evidenced by registrars not wanting to use these methods with their own students.

The study found that the relationships that were observed between various demographic factors and provision of feedback, can negatively impact on registrars acquiring the competencies necessary to be well-trained physicians. Therefore, in order to make a more detailed analysis of the interrelationship between these factors identified, as well as the context or environment in which feedback is given, the content and process of feedback, as well the 'actors' – the multiple   stakeholders involved with giving and receiving feedback, interviews were conducted with key informants to identify not only impediments to the process, but to underscore strengths and opportunities for improvement.

6.2.4 How do the actors (key role players), and the contextual, content and process factors affect provision of feedback? How can the process be improved?

The responses to these questions of the Clinical Training Heads of the six major clinical disciplines are summarised and presented in Chapter 5.

The Clinical Training Heads were interviewed in order to gain an in-depth understanding of how feedback was given in each discipline and to triangulate the feedback about feedback received from the registrars and consultants. Using the Walt and Gilson (1994) triangular framework, a thematic analysis was made of their responses to determine what they perceived the impediments to providing good feedback to be and how they envisioned the process could be improved. This framework allowed for examination of the context and process that simultaneously impact on delivery of content, the actors involved in the process, as well as the relationships between each of these factors.

All the senior clinical participants concurred that feedback was an essential component of training, they identified several contextual or environmental issues that were barriers to providing the desired standard of feedback, with all necessary elements in place. A lack of an overall guiding vision, underpinning standardised policies, was compounded by the multiple bodies governing registrars, in terms of employment, exit criteria and a standardised means of assessing competencies. Given the multiple theories that underpin adult learning and teaching, especially in postgraduate medical education, it is important to have an overall guiding framework for any institution and those in charge of planning learning (Taylor and Hamdy 2013). Such a framework can decrease confusion as to how competency was to be determined and by whom. Heavy clinical workloads, without adequate staff complements, especially since it was difficult to retain experienced consultants, left little protected time for teaching. However, these problems were by no means unique to South Africa (Singh et al. 2013, McQueen et al. 2016), and more creative methods needed to be implemented so as to maximise all teaching encounters, including the use of innovations such as the Mini Clinical Examination or the One Minute Preceptor (Norcini 2005, Gallagher et al 2012). Care had to be taken to ensure that feedback was communicated well enough for the message to be understood (Ramani and Krackov, 2012). Content issues were identified as poor implementation of the portfolios of

evidence, or logbooks, designed to serve as a guide of the objective requirements to determine competencies achieved, and hence eligibility to sit the final exit examination. These had devolved into a 'tick box' of procedures completed, rather than the desired means to give feedback on how competent the registrar was in performing such procedures. Better interrogation of the logbooks (Jenkins, Mash and Derese 2013) or in the future, the introduction of an e-portfolio (Chertoff 2015), would allow for better evaluation of logbooks. The process of giving feedback was hampered by poor standardisation in giving feedback by consultants, as well as the poor monitoring and evaluation by senior staff of how consultants fulfilled their teaching responsibilities. Consultants were not trained to teach, and while able to demonstrate a procedure, had difficulties with the didactical pedagogy involved in explaining how it should be done. Faculty training development initiatives should be developed and implemented (Steinert et al. 2016). Registrars were thought to be demotivated, disinterested, apathetic or too junior and inexperienced.

The overall recommendations that emanated from the study, with a view to improving the process of feedback was that the Clinical Training Heads felt that an overarching policy outlining good feedback practice, and made part of a university-wide culture of teaching and training consultants in how to give feedback, improving communication to determine registrar needs, as well as recruiting registrars with some prior qualification in the discipline would impact more positively on providing feedback.

Medical education needs to be constantly aware of the needs of faculty, staff, and patients, and respond with appropriate transformative innovations. In line with the themes identified and analysed in the discussion with key role players, recommendations were made as to how best to implement an intervention for improvement, namely a Postgraduate Committee for Teaching and Learning (PGCTL), comprising representatives from all the disciplines, University leadership and administration as well as the Department of Health (DoH), the employer of the registrars. This body would have the responsibility for the oversight function of incorporating good feedback practices, including training of consultants, as embodied in a policy to improve postgraduate clinical competencies.

6.4. Limitations

The study was undertaken in one academic hospital which may limit the generalisabilty of the findings. It is recommended that the study be repeated across multiple settings and with a larger sample size in order to increase the reliability of the study. However, the in-depth interviews with the Clinical Training Heads who are responsible for multiple teaching hospitals provided insight into the culture of feedback in other clinical settings. Hence, the findings and recommendations of this study regarding the actors, contextual content and process factors impacting on provision of feedback as well as the how the process might be improved may be applicable across multiple training sites.

Using a mixed methods study design, this study attempted to validate the perceptions of the registrars and consultants. However, there may be responder bias related to the self-administered questionnaires. Future studies could use focus group discussions with registrars and consultants to explore further and gain depth to the open-ended questions. The study was conducted only with registrars and consultants of the six final year disciplines, as a convenience sample. Future studies should extend across all disciplines. This is particularly relevant due to the national implementation of the decentralised learning platforms in the health care sector. The barriers related to the availability and accessibility of the registrars and consultants in more disciplines need to be more explored creatively to increase the sample in future studies. Perhaps better buy-in from Discipline heads related to the importance of this study will facilitate this process in the future.

This study focused on the relevance and importance of feedback in the postgraduate clinical training platform. The policy guidelines recommended in this study for development and implementation needs to be explored in the undergraduate setting as well. Future studies should encourage a culture of feedback in the undergraduate setting, as the earlier good feedback practices are entrenched, the greater the impact on achieving competencies. Additionally, this would encourage medical students to develop capacity for self-authorship and reflective practice, particularly related to their active seeking of feedback for their clinical training development as early as possible in their medical training.

6.5 Recommendations

A proper approach is key to giving good feedback and is dependent on the uniform definition of feedback. The definition adopted for use in this study comprises all the essential elements of feedback: *'A process whereby the desired standard of proficiency in a task has been clearly established. This standard has been communicated to the student. Gaps in performing the task or level of knowledge are identified, based on actual observation of the student, and the student made aware of his or her shortcomings, together with a plan to improve performance.'* This operational definition developed and accepted by the majority of the registrars, consultants and Clinical Training Heads of the six major clinical disciplines in this study is recommended for adoption by all postgraduate training academic hospitals linked to the University.

This study recommends that due to the heavy workload and time constraints in the public health care sector, protected teaching time must also be pursued vigorously and as many opportunities as possible should be maximised for provision of feedback, so that valuable teachable moments are not lost as noted in this study. Even brief and informal feedback at the patient's bedside is recommended as a means for more timeous feedback in the busy clinical settings. Academic days should be used for more structured teaching and enhancing presentation skills of registrars, especially in preparation for the specialty examinations.

Consultants need to be trained in the art of giving feedback, since the paradigm of medical education has moved beyond 'see one, do one, teach one.' The development and implementation of staff development programmes is recommended to enhance the teaching skills of the academic clinicians. The training programmes should incorporate the use of innovative methodologies such as the One Minute Preceptor and Mini Clinical Examination (mini-CEX) that have been found to be particularly useful in demanding clinical settings. Additionally, teaching should be a formal key performance area that consultants are peer reviewed on and given feedback about. Allied to these training programmes should be appropriate sensitization training to prevent and address any racial and gender bias when giving feedback to registrars. Further, communication must be non-emotive and non-judgmental, and note must be taken of the registrar's reaction to the

feedback given and support provided if necessary. While deficiencies should be pointed out, good performance must also be noted and cemented. The registrar should be allowed to respond to the feedback and consultants should be encouraged to ascertain that the intended message was understood, and not 'lost in transmission'.

A comprehensive orientation and refresher programme that is implemented annually for new and current registrars is recommended. This programme needs to include detailed information regarding the training programme, academic setting, requirements and teaching and learning issues. Amidst other necessary information, registrars should be made more aware of the different types of feedback, so that they are more sensitive to feedback when it is being given, in different forms, and not seek out formative feedback only, or disregard brief and informal feedback. This, ideally, should begin in the undergraduate years, but nonetheless can also be re-emphasised in postgraduate training. The in-service training should include academic support programmes for registrars as well, providing enhancement programmes for language, particularly for second English language speakers, as well as skills enhancement training in reflection and self-authorship. In this way, feedback encourages not only improved clinical competencies, but instils a lifelong love of learning that will promote the pursuit of high levels of competency even after training is completed.

The Portfolio of Evidence, or logbook, is a record of all the procedures to be completed before a registrar is deemed eligible to sit the final exit examination. Based on the findings of this study, it is recommended that the logbooks be more appropriately interrogated during in-depth interviews with registrars. This will help determine if competency actually has been achieved, and not devolve into a 'tick list' of activities. This should also be a formal, longitudinal activity, and not a bureaucratic administrative function just before the registrar has completed his or her training. Consultants must also be monitored to ensure that they give formal feedback on the procedures done and that feedback is given considering all the essential elements as per the definition adopted in this study. To enhance efficiency and convenience for tracking and record- keeping, an 'e-portfolio' is recommended as alternate consideration. Future studies need to explore the viability of this recommendation and the financial implications.

The present tri-partite management of registrars in this province from the Colleges of Medicine of South Africa (CMSA) who administers the exit examination, the University, which is responsible for the training of the registrar, and the DoH need to work more collaboratively and in association with each other's requirements. In this way, training, academic and service delivery requirements can be more comprehensively addressed to ensure that the registrar acquires the necessary skills and high levels of competency needed to meet the health needs of the populations they serve, without being merely part of the workforce.

To enhance the teaching and learning platform for postgraduate clinical training, the appointment of a PGCTL to be headed by an Academic Leader for Postgraduate Teaching and Learning, as per the current Undergraduate Committee for Teaching and Learning (UGCTL) is recommended. This committee should draw on the expertise of individuals with a stake in improving feedback processes, not only from all the clinical disciplines but from the wider university academic body, to advise on appropriate pedagogical practices. Registrars, as well their employer body should also be represented.

The PGCTL should aid disciplines in consolidating the necessary competencies in outlining what the practical steps are to achieve these competencies. This committee should also co-ordinate the evaluation of the CMSA's Portfolios of Evidence together with Clinical Training Heads in order to ensure that there is standardized evaluation, monitor and evaluate progress of individual registrars in the Master of Medicine (medical specialty) qualification in terms of timeous achievement of milestones, determining reasons for impediments with this process and helping to overcome this by 'red flagging' registrars not performing in accordance with the desired levels to be achieved, so that corrective mechanisms, such as additional support, can be offered.

Based on the findings of this study, a policy is recommended which serves as the guidelines for the improvement of registrar training programmes, with specific emphasis on the process of feedback. This policy should be aligned to the fundamental principles of good teaching practices that aim to enhance the provision of feedback in the teaching of postgraduate registrars at the Nelson R. Mandela School of Medicine (NRMSM),

University of KwaZulu-Natal (UKZN). Hence, this policy serves to address the identified gap with regards to a core competent of postgraduate registrar training to enhance clinical competencies: namely, the provision of high quality standardised feedback across all the disciplines. Below is a recommended draft policy that was developed guided by findings of this study and structured as per the policy guidelines at UKZN:

Recommended Draft Policy for improving Feedback Processes to Enhance Postgraduate Registrar Clinical Competencies

A. Introduction and Background

The need for high quality, constant feedback has been identified as an integral component of postgraduate registrar training. Within the experiential learning settings of hospitals, supervising consultants transfer their skills by communicating in advance to the registrar the desired standard of competence to be obtained, directly observing their performance and correcting deficiencies through means of an improvement plan. Good performance is consolidated. It is through this mechanism that the novice trainee will be guided through the process of obtaining excellent clinical competencies, resulting in optimal patient outcomes.

At the Nelson R. Mandela School of Medicine (NRMSM), University of KwaZulu-Natal (UKZN), this process, while supported as recommended teaching practice by staff and desired by registrars, has been shown to fall short of the ideal. The quality and quantity, as well as the scope of practice is rated as suboptimal by registrars, while consultants have indicated that they lack the necessary capacity to provide not only feedback because of logistical impediments, but are wary of the process itself because of the lack of support. This situation is exacerbated by the heavy clinical workload that consultants and registrars have to bear as well as a plethora of different governing bodies, namely the Department of Health (DoH), the University structures as well as the Colleges of Medicine of South Africa (CMSA), all of whom have different requirements in terms of determining exit competencies.

A review of international and national university training policies with regards to registrar training programmes has identified similar issues. There is a need to make improvement of feedback a priority. Therefore, this policy serves as the recommended guidelines for the improvement of registrar training programmes, with specific emphasis on the process of feedback. This policy identifies the different role players (or actors), outlines the responsibilities that each has to play, makes recommendations for 'Best Practices' of the process and seeks to improve the contextual environment in which feedback occurs.

B. Policy Statement

This policy is aligned to the fundamental principles of recognized good teaching practice aims to enhance the provision of feedback in the teaching of postgraduate registrars at the NRMSM, UKZN. This policy promotes, supports and gives expression to the overall vision and mission of the University of becoming the premier university of African scholarship. The present practices of teaching and learning are governed by the Policy on Teaching and Learning. However, this policy serves to address the identified gap with regards to a core competency of postgraduate registrar training to enhance clinical competencies: namely, the provision of high quality standardised feedback across all the disciplines.

C. Policy Aim

To enhance the practice of feedback, so as to positively impact on postgraduate clinical competencies, within the teaching and learning culture of the University.

D. Objectives

More specifically, the objectives of this policy are to:

Situate itself within an overall vision and mission outlining the commitment of the university to provide an excellent registrar training programme, in which feedback is an integral component.

Uphold a commitment by the Executive Committee and senior management to ensure that these principles are developed in line with the identified needs of the University, in terms of feedback and other training needs and requirements, to promote the use of these principles.

Provide support for implementation of these guidelines.

Promote adherence by all disciplines to recognised principles of excellence in teaching.

Monitor and evaluate the implementation of this policy.

E. Definition of Feedback

"A process whereby the desired standard of proficiency in a task has been clearly established. This standard has been communicated to the student. Gaps in performing the task or level of knowledge are identified, based on actual observation of the student, and

the student made aware of his or her shortcomings, together with a plan to improve performance."

F. Policy Scope

This policy is applicable to all disciplines offering postgraduate registrar training. This policy is linked to the revised University Policy on Teaching and Learning, the Language Policy of the University and the amended University Strategic Plan (2007 –2016) Goal 4 on Excellence in Teaching and Learning, as well as the competencies that need to be achieved as mandated in the CMSA guidelines for each discipline.

G. The Policy

1. Each discipline will be required to adhere to the overall vision of the University to develop premier scholarship by improved feedback processes in postgraduate registrar training. In order to facilitate the application of this policy, each discipline can develop a mission statement as well as individual teaching objectives. Thus, consultants will be made explicitly aware of the responsibilities incumbent on them in providing good quality feedback in accordance with recognised practice as part of their conditions of employment. Clinical Heads of Department will be responsible for translating this policy into sound academic practice. The principles underpinning improvement in feedback are laid out in this document.

2. The university will appoint a Postgraduate Committee for Teaching and Learning (PGCTL), drawing on the expertise of individuals with a stake in improving feedback processes, not only from all the clinical disciplines but from the wider university academic body, including the Departments of Education to advise on appropriate pedagogical practices. Registrars, as well their employer body will also be represented.

3. The Committee will be headed by an Academic Leader for Postgraduate Teaching and Learning.

4. The functions of the PGCTL are as follows.

> 4.1 The PGCTL will aid disciplines in consolidating the necessary competencies as per the CMSA guidelines into a discipline specific handbook outlining what the practical steps are to achieve these competencies, so that this handbook evolves

from a 'tickbox' into a practical handbook. This handbook will be given to the registrar on commencement of training.

4.2. The PGCTL will provide ongoing in-service education and training to consultants in how to give feedback. Emphasis will be placed on innovative techniques as evidenced in the literature to be meritorious, and of particular relevance to the postgraduate clinical setting, for example the One Minute Preceptor and the Mini Clinical Examination.

4.3. The PGCTL will develop and implement a teaching methodology for feedback, incorporating all the elements for a 'Best Practice':

>i. The standards to be achieved have been communicated in advance.

>ii. The feedback is based on directly observed performance and occurs in a respectful learning space.

>iii. Feedback is regular.

>iv. Feedback is timely, so as to encourage reflection.

>v. Feedback is given in non-emotive, non-judgmental language. It is direct and specific about what was done, and how it was done.

>v. Good performance is reinforced.

>vi. Reflection in the learner on present performance, as well as the consultant on feedback skills is emphasised.

>vii. An improvement plan is key.

4.4. The PGCTL will ensure adequate support structures are in place as well as knowledge of referral pathways for registrars and consultants who are in need of such services following feedback.

4.5. The PGCTL will co-ordinate the evaluation of the CMSA's Portfolios of Evidence together with Clinical Heads of Department in order to ensure that there is standardised evaluation.

4.6 The PGCTL will ensure that there is monitoring and evaluating of registrars' progress with regards to the Master of Medicine qualification in terms of timeous achievement of milestones, determining reasons for impediments with this process and helping to overcome these. This will enable the 'red flagging' of registrars not performing in accordance with the desired levels, so that corrective mechanisms, such as additional support, can be offered.

4.7 The PGCTL will, as well as standardising the exit requirements in order to sit the CMSA examination (including a submitted dissertation), in conjunction with Heads of disciplines, evaluate all CMSA portfolios of evidence to ensure that an appropriate standard of excellence in clinical training is maintained.

5. The University is committed to a non-racial, non-sexist learning environment. The implementation of this policy will uphold this ethos.

6. The process of feedback will be incorporated into the culture of the University.

F. Monitoring of Policy

This policy will be subject to ongoing monitoring and evaluation by Faculty Committees responsible for postgraduate Teaching and Learning and/or Quality and by the College Quality Committee on an annual basis. Registrar throughput in terms of CMSA examination pass rates will be one of the indicators.

G. Review of Policy

This policy will be reviewed by the Postgraduate Teaching and Learning Committee (in conjunction with input from the College Quality Committees) every two years.

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APPENDICES

Appendix 1: Guidelines for presentation of dissertations/theses for higher degrees (amended)

Prepared by Prof M.J. Chimbari

1. Purpose
The purpose of this document is to provide guidance to students and supervisors on how to prepare a dissertation/thesis for Masters and PhD degrees.

2. Introduction
These guidelines must be read together with the College of Health Sciences (CHS) Handbook as well as the Jacobs documents on examination policies and procedures for PhD degrees. The rules on thesis format are based on point 1 of the definition of terms section in the Jacobs document. In this section a thesis is defined as *"the supervised research component of all PhD degrees, whether by supervised research only, or coursework and research, or by papers that are either published or in manuscript form (the supervised research component of the PhD degree by paper(s) comprises the introduction, literature review, account of the methodology, selection of manuscripts, and conclusion)."* A dissertation is defined as "*the supervised research component of all Masters degrees, whether by supervised research only, or coursework and research, or by papers that are either published or in manuscript form (the supervised research component of the Masters degree by paper(s) comprises the introduction, literature review, account of the methodology, selection of manuscripts, and conclusion*)."

2.1 PhD thesis
In the CHS Handbook the rules for a PhD thesis are not in one place; they are stated in DR8 a i & ii, DR9 c and CHS 14. DR8 a I & ii directs that a thesis be presented in the standard type format together with one published paper or an unpublished manuscript that has been submitted to an accredited journal, arising from the doctoral research. DR9 c (thesis by publication) states that the thesis may comprise of one or more original papers of which the student is the prime author, published or in press in peer-reviewed journals approved by college academic affairs board, accompanied by introductory and concluding integrative material. The third option of a thesis format (thesis by manuscripts) is specified in CH14 as a submission constituting at least three, first authored published papers or unpublished manuscripts that have been submitted to an accredited journal.

The standard type thesis is being phased out in many African countries in favour of the other options that originate from the Scandinavian countries. While this format ensures that all details of the work done for the doctoral degree are captured and thoroughly interrogated they often remain as grey literature which is mainly useful to other students, usually within the same university. With digitization of thesis such work may become more accessible beyond the source university. Apart from the risk of losing good work because of it not being on the public domain as students rarely publish such work after

graduating this approach denies the college additional productivity units (Pus) emanating from publications as only PUs for graduating the student are awarded.

The thesis by publication encourages students to publish key aspects of their doctoral research as they will not graduate if the papers are not published or in press. This approach ensures that the work of the student enters the public domain before they graduate and almost guarantees them to pass provided their papers constitute a good story line of a thesis. Furthermore the college maximizes on the students' work as PUs are awarded for the papers as well as for graduating. However, this approach may negatively affect throughput and frustrate students as they cannot graduate unless all the papers are published or in press in addition to the synthesis chapter demonstrating a good story line of a thesis.

The option of a thesis by manuscripts ensures that students make efforts to start publishing. The risk of not passing because of failure to publish (as in the thesis by publication) does not exist under this option. However, the PUs emanating from publications from the doctoral work are not guaranteed as the submitted papers may eventually be rejected. Thus there is a possibility of the doctoral work remaining on the source university library shelves as is the case for the standard type thesis. In this case the standard type has an urge over this option as much more details of the doctoral work are usually in the standard type thesis.

In view of the above the best option to ultimately pursue in the college is that of a thesis by publication. However, in the interim the attractive option is that of thesis by manuscripts as it provides an avenue for supervisors to get the doctoral research published without putting the student at risk of delayed graduation which also disadvantages the college in terms of PU earnings. The standard type thesis option should ultimately be phased out for the stated reasons and students are not encouraged to present their theses in that format. Consequently this document does not describe the standard type thesis.

A PhD thesis will be expected to have between 50 000 and 80 000 words. The introduction and synthesis chapters should have at least 10 pages and 5 pages, respectively.

2.3 Intention to submit
A written intention to submit a thesis or dissertation should be submitted to the appropriate postgraduate office with endorsement of the supervisor at least three months before the actual date of submission which should be before November if the student intends to graduate in the following year. The actual submission will under normal circumstances require approval of the supervisor.

3. Format for PhD theses
There is little variation in the actual format of the PhD thesis and Masters dissertation for the various types described above.

4. Details for thesis/dissertation subheadings

This section summarizes what is expected under each subheading shown in Boxes 1 and 2 and indicates where there might be variations between a Masters Dissertation and PhD Thesis.

4.1 Title Page

The officially approved title that is concise (Fewest words that adequately describe the contents of the thesis/dissertation usually15 or less words) is presented at the top. This should be followed by the candidate's name in a new line. At the bottom the thesis statement should be presented. The thesis statement may be stated as "*Submitted in fulfillment of the requirements for the degree of ____ in the School of _____, University of KwaZulu-Natal"* for a PhD thesis.

4.2 Preface and Declaration

The preface and declaration may be presented together. The preface merely states the reason (motivating factors) whey the study was conducted without getting into details of what was investigated. The declaration must state that the work has been done by the candidate and that it has not previously been submitted to UKZN or another tertiary institution for purposes of obtaining a degree or any other academic qualification. It may state the supervisor for the work. The declaration must be signed by the candidate.

4.3 Dedication

This is an optional section. Should it be included it must be very brief merely indicating to whom the work is dedicated.

4.4 Acknowledgements

This section acknowledges all individuals, groups of people or institutions that the candidate feels indebted to for the support they rendered. The funding source for the work should also be acknowledged.

4.5 Table of contents

Table of contents must be inserted after the preliminary sections and must capture all major sections of the thesis at the various levels (primary, secondary, tertiary subheadings). It should be electronically generated and should be able to take the reader to specific headings in the thesis.

4.6 Lists of figures, tables and acronyms

The lists must be presented separately. All titles of figures presented in the thesis/dissertation must be listed indicating on what page they appear. Similarly for tables the titles must be presented indicating on what page they appear. In the case of acronyms, the acronym is stated and all the words describing the acronym are presented. Only key acronyms should be stated. In some cases they may not be listed as long as whenever the acronym is used for the first time full text is presented.

4.7 Abstract

The abstract should summarize the thesis mainly the stating the purpose of the study, highlights of chapters and the new knowledge contributed by the thesis. In the case of a Masters dissertation there major outcome does not necessarily have to be new knowledge.

The abstract must be approved by the supervisor of the thesis and should not be more than 350 words in length.

4.8 Introduction
The introductory chapter for both types of thesis is similar. The section should have at least 8 pages for a Masters dissertation and 10 pages for a PhD thesis inclusive of literature review and should include the following:

    i.   background and the context of the study
    ii.   description of the core research problem and its significance
    iii.   a comprehensive, critical, coherent, overview of the relevant literature leading to clearly defined knowledge gaps *(In the case of a traditional thesis, this should be a stand alone section)*
    iv.   a coherent problem statement highlighting the nature and magnitude of the problem, the discrepancy, knowledge gaps therein and possible factors influencing the problem.
    v.   Clear and smart research questions, objectives and hypothesis and/or theoretical framework
    vi.   a conceptual framework (optional)
    vii.   description of the study area and general methodology *(in a standard thesis this should be a standalone section)*
    viii.   layout of the thesis (thesis structure) indicating what chapters are presented in the thesis and how they address the objectives.

4.9 Literature review
This section is subsumed in the introduction within the 8 and 10 pages specifications for dissertation and thesis, respectively.

4.10 Methodology
In a thesis by manuscripts or publications this section is not needed as the methods are adequately described in each manuscript/publication. However, in the case of a traditional thesis much more details are required including the study area, design, specific methods and description of data analysis.

4.11 References
This section only applies to the thesis by manuscripts or publications. The references cited in the introduction should be listed where as in the case of the standard thesis the references cited in the introduction, literature review and methodology sections appear with the rest of the references at the end of the thesis.

4.12 Data chapters/manuscripts/publications
In the case of a standard thesis, this section presents the results of the work carried out and a brief discussion of the findings with no reference list presented. However, in the case of thesis by manuscripts or publications, the full paper is presented as published or submitted to the journal. The actual published paper should be scanned and inserted in the chapter. Between chapters there should be a separator page that states the chapter number and details of the manuscript indicating publication status.

4.13 General discussion/Synthesis chapter

The section should be at least 4 pages (dissertation) or 5 pages (thesis) and should provide a general discussion that demonstrates the logical thread that runs across the various manuscripts/publications. There should be no doubt that the manuscripts/publications complement each other and address the original objectives stated in the general introduction of the thesis. The general discussion/synthesis chapter should end with a conclusion and recommendations where necessary.

4.14 References

In the case of the standard thesis all references cited in the data chapters should be listed in this section. However, for a thesis by manuscripts or publication only references cited in the synthesis chapter should be listed as all other references should be within the manuscripts presented under data chapters.

4.15 Annexes

All information (questionnaires, diagrams, ethics certificates etc) considered important but not essential for inclusion in the actual thesis is put in this section as reference material.

5. Thesis formatting

For standardization of thesis the following formatting specifications must be followed.

5.1 Font

Times New Roman 11pt should be used throughout the thesis. However, major headings may be made bigger (12pt) but using the same font type

5.2 Paper size and margins

A4 (297 x 210 mm) should be used and in the final thesis all sides of the paper should be used. However, the loose bound copy and electronic version submitted for examination should be printed on only one side. The recommended margins are 30mm for all the left, right, top and bottom margins.

5.3 Line spacing

The copy submitted for examination should have 1.5 line spacing but the final copy should have single line spacing. Published or submitted manuscripts should remain in their original format in all aspects as they are scanned and placed in appropriate places. Paragraphs should be separated by a blank line.

5.4 Headings

A consistent numbering system and captions should be maintained with first level being in CAPS and centred, second level being normal bold font and third level being italics bold. If there is need for 4th level it should be normal italics.

5.7 Pagination

Page numbers should be centred at the bottom of the page. Preliminary pages should be numbered in lower case Roman numerals and subsequent pages should be numbered with Arabic numerals as indicated in Boxes 1-3. All pages including the title page should be numbered.

5.8 Referencing

Supervisors have the freedom to decide the type of citation of references but there must be consistence. This is mainly applicable to the standard type of thesis. In the case of thesis by manuscripts or publications, individual papers will maintain the reference system of the journal but the supervisor can decide on the type of referencing for the introductory and synthesis chapters.

6. Final thesis submission

The thesis should be submitted for examination in a loose bound form accompanied by a PDF copy. After the examination process the final version PDF copy of the thesis must be submitted to PG office for onward submission to the library. It is not a requirement to submit a copy fully bound in leather cloth or similar material.

Appendix 2: Ethical approval

29 January 2014 UNIVERSITY OF
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

Dr Chauntelle I Bagwandeen (630406)
School of Nursing and Public Health
Howard College Campus

Protocol reference number: HSS/1185/013D
Project title: "Sowing the Seeds": The use of Feedback in Postgraduate Medical Education: A key factor in
In developing and enhancing clinical competence

Dear Dr Bagwandeen,

Full Approval – Expedited
response to your application dated 02 September 2013, the Humanities & Social Sciences Research Ethics
Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL.**

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent
Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved
through the amendment/modification prior to its implementation. In case you have further queries, please quote
the above reference number.

Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

....
Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr Veena Singaram
cc Academic Leader Research: Professor M Adhikari
cc School Administrator: Ms Veronica Jantjies

Appendix 3: Gatekeeper permission

UNIVERSITY OF KWAZULU-NATAL TM
INYUVESI
YAKWAZULU-NATALI

5 December 2013

Dr C Bagwandeen
School of Clinical Medicine
College of Health Sciences
NRMSM
Email: bagwandeenc@ukzn.ac.za

Dear Dr Bagwandeen

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"The use of feedback in postgraduate medical education: A key factor in developing and enhancing clinical competence".

It is noted that you will be constituting your sample with a request for responses on the website. A copy of this letter (Gatekeeper's approval), the ethical clearance and the questionnaire must be sent to (govenderlog@ukzn.ac.za) or (ramkissoonb@ukzn.ac.za) which will be placed on UKZN notice system http://notices.ukzn.ac.za. You are not authorized to distribute the questionnaire to staff and students using Microsoft Outlook address book.

Please note that the data collected must be treated with due confidentiality and anonymity.

Yours sincerely

Professor J J Meyerowitz
REGISTRAR

Appendix 4: Informed consent

<div align="center">

INFORMED CONSENT

Information Sheet and Consent to Participate in Research

</div>

Date: 30 April 2014

Greeting: Dear Colleague

My name is Dr Chauntelle Bagwandeen from the Discipline of Public Health Medicine, School of Nursing and Public Health of the College of Health Sciences, University of KwaZulu-Natal. My phone number is 031-2604383 and my e-mail address is bagwandeenc@ukzn.ac.za.

You are being invited to participate in a study that involves research about the quality of feedback that is provided to you, or that you provide, about the skills and level of expertise that registrars are expected to acquire during their training. The aim and purpose of this research is to determine the processes that are in place regarding this aspect of post-graduate teaching and make recommendations for improvement based on the findings. The study is expected to enroll approximately 300 registrars across all the clinical disciplines at the Nelson R. Mandela School of Medicine. It will involve you answering a short on-line questionnaire. The process is entirely voluntary, and all results will remain completely confidential.

The study may involve the following risks and/or discomforts only in terms of the time taken to answer the questionnaire. We hope that the study will create the following benefits: an improvement in the feedback process during clinical training, thereby impacting positively on the skills and expertise that a registrar needs to obtain during post-graduate training.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee.

In the event of any problems or concerns/questions you may contact the researcher at 031-2604383 ,e-mail address bagwandeenc@ukzn.ac.za or the UKZN Humanities and Social Sciences Research Ethics Committee, contact details as follows:

For attention: Ms P Ximba
UKZN Humanities and Social Sciences Research Ethics Committee
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2603587 - Fax: 27 31 2604609 Email: ximbap@ukzn.ac.za

Participation in this research is voluntary.
All information will be handled in a confidential manner
Participants may withdraw participation at any point.
In the event of refusal/withdrawal of participation the participants will not incur penalty or loss of any benefit to which they are normally entitled.

CONSENT

I, …………………………………………………………………………………………………have been informed about the study entitled '"SOWING THE SEEDS" The use of Feedback in postgraduate medical education : A Key Factor in developing and enhancing clinical competence' by Dr Chauntelle Bagwandeen.

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any benefits that I would usually be entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at 031-2604383 or bagwandeenc@ukzn.ac.za

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researchers then I may contact:

Ms P Ximba
UKZN Humanities and Social Sciences Research Ethics Committee
Research Office, Westville Campus
Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2603587 - Fax: 27 31 2604609
Email: ximbap@ukzn.ac.za

Appendix 5: Questionnaire for consultants

Dear Colleague

Kindly spend a few moments to answer these questions about the feedback that you provide to your registrars.
Your participation is completely voluntary, and all responses will be kept completely confidential.

For the purposes of this study, FEEDBACK is defined as:

"A process whereby the desired standard of proficiency in a task has been clearly established. This standard has been communicated to the student. Gaps in performing the task or level of knowledge are identified, based on actual observation of the student, and the student made aware of his or her shortcomings, together with a plan to improve performance."

Demographic information

Age:……………………………………..

Race:

☐African   ☐ White   ☐ Indian   ☐Coloured   ☐ Other

Gender:

☐Male   ☐ Female

Years of Specialisation……………………………

Discipline:

☐Surgery   ☐Internal Medicine   ☐O&G   ☐ Paediatrics   ☐ Psychiatry

☐Fam Med

Highest previous qualification obtained:

☐ MBChB

☐ MMed

☐ PhD

☐ Other……………………………………………………..
Home/ First Language

☐English

Other:

☐ Afrikaans

☐ Zulu

☐ Xhosa

☐ Swati

☐ Northern Sotho

☐ Sotho

☐ Tswana

☐ Tsonga

☐ Venda

☐ Southern Ndebele

☐ Other

Please answer the following questions related to your experience of providing feedback to your registrars.

1. Feedback is provided in all encounters with a registrar

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

2. Feedback is provided in these settings (more than one option applicable)

☐ Bedside teaching ☐ Sideroom settings ☐Academic Days ☐One-on-one

☐ Group teaching

3. Feedback is of the same standard at all institutions

☐ Yes   ☐No

4. Feedback is informal

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

5. Feedback is formal

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

6. Formal feedback sessions are clearly scheduled in advance

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

7. Formal feedback sessions are held in an appropriate location

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

8. Standards for assessment are pre-determined and communicated to the registrar in advance

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

9. Feedback is based on concrete observations of the performance of the registrar

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

10. Feedback is given about procedures and techniques performed incorrectly

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

11. Feedback is given about procedures and techniques performed correctly

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

12. Feedback encourages reflection about previous feedback

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

13. Feedback incorporates a plan for improvement

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

14. Feedback is given in non-emotive, non-judgmental language

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

15. Feedback is influenced by race, gender or ethnicity of the registrar

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

16. Feedback is given about:

16.1 clinical skills
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

16.2 technical skills
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

16.3 inter-personal skills
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

16.4 communication skills
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

16.5 evidence-based practice
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

16.6 ethics
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

17. Feedback is given about how to be a:

17.1 medical expert
☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

17.2 communicator

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

17.3 collaborator

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

17.4 manager

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

17.5 health Advocate

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

17.6 scholar

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

17.7 professional

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

18. The registrar has an opportunity to respond to the feedback given

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

19. Formal feedback incorporates new learning objectives

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

20. Feedback is documented

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21. The effect of feedback on the registrar is noted

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

22. Support is available to the registrar from different sources after both formal and informal feedback sessions.

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

23. I am proficient at giving feedback to my registrars

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

24. My feedback sessions are always successful - the registrar receives the intended message in the intended manner

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

25. The registrar agrees with the feedback provided

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

26. I prefer giving group feedback

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

27. I would like to receive peer feedback

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

28. I feel that consultants should be trained to give feedback

☐ Yes ☐No

29. I feel providing feedback regarding registrar's clinical proficiency is important

☐ Yes ☐No
Why?..
....
....

30. I provide feedback in preparation for the Fellowship examinations

☐ Yes ☐No

31. This feedback is

31.1 Adequate

☐ Yes ☐No

31. 2 Timeous

☐ Yes ☐No

32. I provide feedback regarding the MMed research process

☐ Yes　　　　　　☐No

33. This feedback is

　　33.1 Adequate

☐ Yes　　　　　　☐No

　　33.2 Timeous
☐ Yes　　　　　　☐No

34. How do you feel when you provide feedback?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

35. What impact has providing feedback had on you?

……………………………………………………………………………………………

……………………………………………………………………………………………

36. Does the esteem the registrar holds you in influence the way he/she receives feedback from you?

☐ Yes　　　　　　☐No

Why?

……………………………………………………………………………………………

……………………………………………………………………………………………

……………………………………………………………………………………………

37. Does the esteem the registrar holds you in influence the way you give feedback to him/her?

☐ Yes　　　　　　☐No

Why?

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

38. Regarding feedback what are your:

38.1 Compliments?

…………………………………………………………………………………

…………………………………………………………………………………

38.2 Complaints?

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

38. 3 Recommendations?

…………………………………………………………………………………

…………………………………………………………………………………

Appendix 6: Questionnaire for registrars

Dear Colleague,
Kindly spend a few moments to answer these questions about the feedback that
you receive from our consultants.

Your participation is completely voluntary, and all responses will be kept
completely confidential.

For the purposes of this study, FEEDBACK is defined as:

**"A process whereby the desired standard of proficiency in a task has
been clearly established. This standard has been communicated to the
student. Gaps in performing the task or level of knowledge are identified,
based on actual observation of the student, and the student made aware
of his or her shortcomings, together with a plan to improve performance."**

Age:……………………………………………..

Race:

☐African   ☐ White   ☐ Indian   ☐ Coloured   ☐
Other

Gender:

☐Male   ☐ Female

Highest previous qualification obtained:

☐ MBChB

☐ MMed

☐ Other……………………………………………………

Home/ First Language

☐ English

☐ Afrikaans

☐ Zulu

☐ Xhosa

☐ Swati
☐ Northern Sotho

☐ Sotho

☐ Tswana

☐ Tsonga

☐ Venda

☐ Southern Ndebele

☐ Other

Year of post-graduate training

☐ 1st   ☐ 2nd   ☐ 3rd   ☐ 4th

Discipline:

☐ Surgery   ☐ Internal Medicine   ☐ O&G   ☐ Paediatrics   ☐ Psychiatry

☐ Fam Med

Answer the following questions related to your experience of receiving feedback from your consultants

1. Feedback is provided in all encounters with a consultant

☐ Never   ☐ Rarely   ☐ Sometimes   ☐ Often   ☐ Always

2. Feedback is provided in the following settings

☐ Bedside teaching ☐ Sideroom settings ☐Academic Days ☐One-on-one

☐ Group teaching ☐ Other: Explain:……………………………………………

……………………………………………………………………………………………

3. Feedback is of the same standard at all hospitals that you have trained at.

☐ Yes   ☐No

4. Rank the hospital in order of best feedback provided by inserting 1(best) to 7 (worst) next to the hospital listed.

☐ King Edward VIII Hospital

☐ RKK Hospital

☐ Wentworth Hospital

☐ Inkosi Albert Central Hospital

☐ Grey's Hospital

☐ Ngwelezane Hospital

☐ Other…(name)………………………………………………………………………

5. Feedback is the same in all my rotations

☐ Yes   ☐No

6. Which rotation provided the best feedback? Why?

……………………………………………………………………………………………

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7. In which rotation did you have the least feedback? Why?

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8. Informal feedback is provided

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

9. Formal feedback is provided

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

10. Formal feedback sessions are clearly scheduled in advance

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

11. Formal feedback sessions are held in an appropriate location

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

12. Standards for assessment are pre-determined and communicated to me in advance

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

13. Feedback is based on concrete observations of my performance

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

14. Feedback is given about procedures and techniques I perform incorrectly

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

15. Feedback is given about procedures and techniques I perform correctly

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

16. Receiving feedback encourages reflection about previous feedback

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

17. A component of the feedback process is a plan for my improvement

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

18. Feedback is given in non-emotive, non-judgmental language

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

19. Feedback is not influenced by my race, gender or ethnicity

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

20. Feedback is given about:

20.1 clinical skills
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

20.2 technical skills
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

20.3 inter-personal skills
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

20.4 communication skills
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

20.5 evidence-based practice
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

20.6 ethics
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21.Feedback is given about how to be a:

21.1 medical Expert
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21.2 communicator
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21.3 collaborator
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21.4 manager
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21.5 health Advocate
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21. 6 scholar
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

21.7 professional
☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

22. I have an opportunity to respond to the feedback given

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

23. Feedback incorporates new learning objectives for me

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

24. Formal feedback is documented

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

25. The effect of feedback on me is noted by my consultant

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

26. Support is available to me from different sources after both formal and informal feedback sessions

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

27. Consultants are proficient at giving feedback to registrars

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

28. Which Consultants are proficient at giving feedback to registrars?

☐ All consultants ☐ Most consultants ☐ Few Consultants
☐ No consultants

29. Feedback sessions are always successful – I receive the intended message in the intended manner from my consultant

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

30. I agree with the feedback

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

31. I would use these techniques when I have students

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

32. I would like to receive group feedback

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

33. I would like to receive peer feedback

☐ Never ☐ Rarely ☐ Sometimes ☐ Often ☐ Always

34. I feel that consultants should be trained to give feedback

☐ Yes ☐No

35. I feel feedback regarding my clinical proficiency is important

☐ Yes ☐No

Why?...
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………………………………………………………………………………………………

36. Is feedback provided in preparation for the Fellowship examinations?

☐ Yes ☐No

37. Is this feedback

37.1 Adequate?
☐ Yes ☐No

37.2 Timeous?
☐ Yes ☐No

38. Is feedback provided regarding the MMed research process?

☐ Yes ☐No

39. Is this feedback

      39.1 Adequate?
      ☐ Yes   ☐No

      39.2 Timeous?
      ☐ Yes   ☐No

40. How do you feel when you receive feedback?

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41. What impact has receiving feedback had on you?

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42. Does the esteem you hold your consultant in influence the way you receive feedback from him/her?

☐ Yes   ☐No

43. Why?

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44. Regarding feedback what are your:

      44.1 Compliments?

      ………………………………………………………………………………………

      ………………………………………………………………………………………

44.2 Complaints?

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44.3 Recommendations?

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Thank you so much for taking the time to complete this questionnaire.
I really appreciate your time and effort.
I will feedback results to you as soon as the data has been analysed.