Overcoming barriers to learning for junior doctors in the delivery suite: A case study

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Preface

This case study was a medical educational development project undertaken as part of my Masters in Medical Education dissertation whilst I was working as a foundation trainee at the Luton and Dunstable University Hospital. Throughout my foundation training I noticed the challenges junior doctors faced in the workplace related to learning and putting theory into clinical practice, I wanted to undertake a project which specifically analysed and attempted to overcome some barriers in one of the busiest clinical environments, the delivery suite, and encourage others to think about improving workplaces to benefit their trainers/learners.

Being a foundation doctor is by no means easy, several factors influence the experience including the job role itself, the colleagues we work with, the institution and its attitude towards junior doctors but also our peers and the individual themselves. Perceptions, attitudes and motivation change as regularly at the rotation, people around us and learning opportunities.

There are many people I would like to thank who have contributed in some way, shape or form towards this project and assisted me during this journey:

Dr Clare Morris, my project supervisor, for her valuable thoughts and suggestions and feedback throughout the whole masters, especially during this project. Without her guidance I would have exited this course a long time ago and probably never would never have got the "Medical Education Bug".

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Finally, thank you to all who have listened to me talk about nothing else other than writing this report and gave me support during this phase of my life, but most importantly during the whole process, a break from reality!

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Chapter 1 - Summary

The delivery suite is a busy and challenging environment for junior doctors. Here, frequent clinical emergencies and service demands commonly act as barriers to learning. An educational development project was undertaken in the delivery suite setting with an aim to see if educational interventions would help overcome barriers to learning in this busy workplace, and thus, enhance learning experiences for junior doctors. This project found that learning and teaching can take place regardless of how busy the working environment is. Opportunistic learning can be found through ward rounds, and a learner centred induction programme improves junior doctors' understanding and confidence in treating patients. Furthermore, discussing medical education in timetabled teaching can help barriers to learning be overcome. Having a curriculum which is relevant and focused to the learning of junior doctors within a specific department gives them an opportunity to undertake self-directed learning, link it to their daily practice and also provides a focus for workplace based assessments.

Junior and senior doctors both understand and appreciate the importance of overcoming barriers to learning and enhancing learning experiences for junior doctors, especially by making junior doctors feel more integrated team members and giving them ownership and responsibility for patient care. The findings from this project will help shape future practice locally and should be continually evaluated and improved to benefit the learning experiences of junior doctors in the delivery suite.

Chapter 2 - Introduction

This is an educational development project report for the MA in Medical Education project. It highlights the rationale for the project during this introduction and then moves onto the literature review, ethical consideration and methods sections. The findings and discussion which outlines limitations and future work follows, ending the report with a conclusion.

This study draws upon my lived experience as a junior doctor working for four months in the delivery suite at the Luton and Dunstable Hospital. I became well accustomed to the busy workload, pressures and stresses that exist on a daily basis in this clinical setting. Due to intense workloads, large volumes of patients, regular medical emergencies and ongoing increases in administrative tasks, it can be difficult to have a positive learning experience or actually allocate time for learning/teaching. For example, during rotations, many junior doctors can perceive it as a "survival exercise" (Bligh, 2007). Having experienced it first hand and continuously witnessing the tensions between service demands and learning arising from knowledge acquisition and participation split, it is crucial to recognise the value of mobilising the learning that occurs during working. Arguably, the busy clinical workload and medical emergencies should encourage and allow for increased opportunistic learning.

Project Rationale

The research question developed and stemmed from my experience as a junior doctor in this department. I wanted to undertake an educational development project that aims to enhance the learning experience for junior doctors in the busy delivery suite setting, specifically by overcoming barriers to learning through implementing changes. Junior doctors want to learn, senior clinicians want to teach, and a busy department means there are ample opportunities for learning/teaching to take place, however, in reality it unfortunately does not. As a junior doctor in the delivery suite the daily workload varies by the hour and thus the workplace cannot and does not always offer the same learning opportunities to all learners (Billett, 2002). If this is the case, there needs to be a method of appreciating and encouraging the learning process for junior doctors, so that opportunities that do arise are maximised, and a consistent and fair environment exists. It is for this reason that this educational development project was undertaken. Learning can arise from engagement in the workplace but from my experience it seems that the learning has to be made truly explicit for this to happen, influences such as Lave and Wenger and Billet have inspired me to think from their theoretical position and thus through this project, I aimed to shape, change attitudes towards, and maximise learning for junior doctors in the delivery suite by attempting to overcome barriers in the workplace. Not only would it help with learning during this specific rotation, but it will also allow knowledge/skills to be transferred in future rotations and throughout ones career.

The divide between medical and midwifery team although historical in principal, can still be experienced in the workplace. Learning opportunities are prioritised in the delivery suite for midwives and midwifery students, such as normal deliveries. As a result of this, motivation and self-esteem is low amongst junior doctors as they are just expected to undertake the same clerical and clinical tasks. In the literatures, this has been described as workplace affordances being unevenly distributed (Billet, 2001).

I want trainees to lead change in overcoming this and felt strongly that the best way for this to start taking place was by doing something actively myself, my starting point being this project.

From an organisational context, previous attempts to change workplace learning by senior clinicians in this department have not been well received by junior doctors and therefore not followed through or reformed for re-implementation. This may be due to a lack of engagement by junior doctors, complex working patterns, increased clinical workload or a lack of participation in involving junior doctors prior to implementation. The hospital has received negative feedback for two successive years related to teaching and training for junior doctors. This has been both through the foundation programme and general medical council annual feedback questionnaires completed by junior doctors at the end of their year placement within their hospital. The specialty of obstetrics and gynaecology in is now less competitive to apply for than previously and is a direct result from fewer applicants to this specialty as a career choice, competition ratios have reduced from 7.12 applicants per place in 2008 to 6.59 in 2009 and 6.02 in 2010 (MMC, 2013).

If learning experiences were enhanced for junior doctors during a four month rotation as a foundation doctor, it may possibly encourage more applicants to this specialty. From a national and international perspective, it has been well documented that newly qualified doctors feel that they are underprepared for the role they are about to undertake upon qualification (Illing et al, 2008), this is also echoed and agreed with by qualified healthcare professionals from a variety of medical specialties, including obstetrics (Goodfellow and Claydon 2001, Moercke and Eika 2002, Smith and Poplett, 2002, and Burch et al. 2005). The professionalisation of medical education agenda in the UK responded to these issues, including effectiveness and efficiency of medical training, the emphasis is now a shift towards educational roles and responsibilities of educational/clinical supervisors and faculty development initiatives (Hilton, 2005). The overall aim being to "upskill" individuals, by learning as acquisition.

This project differs as it responds to the workplace as a whole, involving the whole team and is trainee led as opposed to trainer led.

Project Direction

This project charts and enunciates different elements that comprise learning in the delivery suite setting and looked to enhance understanding in the area through the evaluation of trial interventions. As this project report relates to education development that has been undertaken, a literature review follows this introduction as its own section. The key research question/aim and its sub-sections will follow the literature review to relate and correlate the need for this project with already published work. Overall, the aim was to encourage learner centred and learner led learning, with a faculty in place to oversee, develop and continually improve the learning environment and platform for junior doctors by including them in their work.

Working as a junior doctor entails dealing with a variety of workload and shift patterns, commonly leading to high levels of stress, anxiety and in some cases, initially compromising patient care (Paice et al, 2002 and Lempp et al, 2004). If workplace development can improve or overcome this, the likely outcomes are always going to be positive ones for junior doctors, the workplace and most importantly, patient care. If the rotation encouraged teaching and learning "on-the-job", and was facilitated by senior clinicians to oversee the curriculum or learning objectives so that they are relevant to the clinical priorities and needs for patient care, the above barrier may possibly be lessened or eventually, even overcome.

The four areas that will be explored for the literature review are: induction programmes in medical education; workplace based learning in general; the use of a curriculum in medical education; and the importance of ward rounds as a learning/teaching tool. These areas were identified based on a learning needs assessment from my own experience and other junior doctors that have worked within this department. The interventions trialled were my own proposed original ideas and discussed with junior and senior doctors and tailored towards the needs of the junior doctors. Together we identified that an absence of these four interventions, prior to this project, were important reasons why junior doctors had a lack of clear direction towards learning. They could be identified to improve shared teaching/learning between senior and junior doctors and most importantly, would ensure barriers to facilitated learning were overcome in the delivery suite. These interventions are derived from the workplace based learning stance that learning is embedded in the practice of the workplace (Lave and Wenger, 1991).

The importance of this development project taking place is based on the above, coupled with my first hand experience of working in this department as a junior doctor. My aim was to undertake an educational development project to find out first hand whether interventions can improve/enhance learning in the workplace for junior doctors. The faculty and department can then work to further enhance and sustain effective workplace based learning for junior doctors. This is directly linked to previous research and evidenced in literatures that will be explored both in the literature review and discussion sections of this project report. This project will contribute to the

existing understandings and practice of this specific department and overall to the evidence base of medical education related to this work.

The findings of this project have the potential to and intends to expand on and redefine current practice with regards to ward rounds, the use of curricula for a junior doctors rotation and induction programmes whilst also ensuring it focuses on medical education and the learning process for junior doctors overall in this particular delivery suite. This will have very specific outcomes that ensure the learning and knowledge to be gained by junior doctors is applicable in helping improve the care they deliver to patients in the department.

The above combined makes this project unique in the sense that it is trainee led and driven, whilst empowering the department to take ownership during and after this specific project completion by facilitating a faculty to continue developing and enhancing learning for junior doctors in a real clinical workplace.

Chapter 3 - Literature Review

A cross section of literature to provide a rationale related to the chosen interventions will be explored, common themes expounded and dissenting views highlighted. As the title suggests, the ultimate aim of this project is to overcome barriers to learning for junior doctors in the delivery suite. This section is not a traditional literature review of all literatures, but rather a select set of literature to shed light on the issues pertinent to junior doctors learning and this projects' interventions. Discussion centred on these specific areas is of particular significance as there is scope for the interventions to be implemented on a permanent basis if they are deemed to be successful. There is a vast amount of literature which has not been reviewed as it is beyond the scope of this project, but are still important contributors to the evidence based of medical education.

Induction Programmes

The resounding acceptance of induction programmes is an emphatic validation of this particular system of learning enhancement. Nuances are found in the mode of delivery of such programmes but their need/implementation is almost universally supported.

The lack of confidence and preparedness of newly qualified doctors is introduced as the catalyst for the creation of an induction programme in each of the papers studied. For example, Brown et al (2007) articulates the difficulties faced by new doctors and is one of the few papers to hint at voicing a dissenting view. This study reveals that a lack of formal guidance and support were common characteristics associated with the first few days in employment.

The authors' findings demonstrate that a lack of support from colleagues leaves many new doctors feeling redundant and that progress is further stifled through a general lack of recognition and the repetitive nature of some tasks. To defeat the notion that a doctor's first year is one to be endured not enjoyed, the authors assert that new doctors should be placed in an environment where learning is clearly structured and facilitated. Crucially, they state that challenges abound even after a useful induction period. Rather than advocating a set induction schedule, their emphasis is placed on giving new doctors the guidance necessary to making a confident start in interpreting and delivering their role as well as allowing them to reflect upon and articulate their formative experiences as openly as possible. The authors conclude that ongoing, systematic training for both trainees and supervisors is the solution that educators should consider.

Donaghy's study in 2008 developed and evaluated an induction programme for junior doctors entering foundation practice. The findings supported the implementation of a programme that was standardised, comprehensive and robust. Significantly, all the trainers surveyed thought it was important to have a standardised induction programme. "Standardised" is the operative word in this study as it is later noted that practices not offering a standardised programme were especially vulnerable to challenge in the future.

The notion that consistency and standardisation are key components to structured learning are further elucidated by Nathavitharana's study (2005) advocating the use of an online generic induction package. The package was developed through multi-professional collaboration and incorporated best practices in e-learning with the aim of enhancing patient safety and potentially ending decades of repetitive teaching. Nathavitharana stresses the importance of making inductions efficient and urges clear guidance on which topics should be covered, in what depth, and how frequently.

It is also important to acknowledge the psychological upheaval from student to junior doctor that necessitates their development. Both Berridge et al (2007) and Evans et al (2004) test the effects on perceived confidence and assessed clinical skills of an induction period. Both studies highlight the concern that junior doctors find their new roles stressful and the transition abrupt. The findings revealed that junior doctors lacked both confidence and ability with regards to clinical skills. Prior to embarking on training programmes, their perceptions about their own abilities were characterised by negativity. Having completed structured inductions, their fears and anxieties were largely assuaged. Both studies advocated the importance of shadowing and clinical skills training during the programme. Berridge et al's paper also encouraged the need for full days of shadowing, allowing the additional transmission of experience and generic skills from outgoing junior doctors. A refinement of the balance between practical learning and academic learning was also encouraged by the authors. The conclusions of both reports were equally emphatic and embody the consensus on the implementation of induction programmes: they enable learning through the uplifting of confidence and clinical skill-sets and, with ongoing improvement, will form the backbone of learning curricula. From a theoretical stance it could be seen as "legitimate peripheral participation", involving the junior doctors in the workplace by making the induction relevant to their workplace before they have even started, making them feel already part of the team and prepared for what is about to be experienced (Lave and Wenger, 1991).

Project intervention link – to trial an induction programme which is focused on the needs of junior doctors, to improve confidence and clinical ability for their role in the workplace.

Learning in the Workplace

Workplace based learning is of fundamental importance to the development of junior doctors. Literature in this area has illuminated a variety of methods used to aid workplace based learning, the spread of emphasis and the fact that the debate is framed in different ways.

Some academics have written about creating appropriate situations for learning and how both context and content are important for creating appropriate learning environments. Morris (2003) focused on the ways in which active and purposeful observation can be used to structure and guide learning in opportunistic settings. The paper describes how observation must be purposeful to be effective and that a situation must be created to facilitate purposeful observation. Thus, the author advocates the use of "observation guides" to structure the learners' observations, bringing to the fore relevant existing knowledge, skills or attitudes in readiness for further learning. The ability to organise observational scenarios is also cited as an important step in assisting a learner's transition.

The idea of creating effective learning situations is further highlighted by Hutchinson (2003). The difficulty of establishing rules of teaching that fit all possible situations is a theme that is introduced at the outset of this study. Hutchinson asserts that there is no right or wrong way to enable learning; rather the educators' emphasis should focus on setting up conditions that will most effectively allow any given approach to work. Steps that can enable such conditions include; setting up a positive learning environment; finding out more about learners and their experiences/skills, identifying objectives for them and appropriate preparation.

The onus of creating a suitable environment for learning is placed on the faculty, more specifically in the context of centralised faculty development activities (Steinert et al, 2010). Activities organised by central faculty bodies were deemed to aid the personal and professional development of doctors and proved to be an empowering source of learning and self improvement. McKimm and Jollie (2010) highlighted that an e-learning programme for clinical teachers set up by The London Deanery was also held to be a valuable adjunct to other learning in methods.

From these studies, it is clear that see the primacy of the idea that fostering appropriate situations for learning is important; whether established by the faculty itself or not. Okuda et al (2009) identify a disconnect between classroom learning and learning in the clinical environment. The authors alluded to other studies that asserted the effectiveness of simulation in the teaching of basic science and clinical knowledge, procedural skills, teamwork, and communication. Gordon and Pawlowski (2002) also stated that simulators provide doctors with a valuable learning tool, particularly if they are designed to help students fill in the gaps in their own education, on demand. In this way,

simulators can be used alongside traditional tools of teaching to facilitate greater productivity in workplace based learning.

Project intervention link – To trial creating appropriate and effective learning situations and environments whilst using purposeful observation with faculty involvement. Proposing simulation to overcome barriers may be beneficial at a later stage but at present raising awareness of the importance of medical education related to junior doctors learning is more beneficial and therefore will be trialled to create a positive learning environment.

The benefit of a Curriculum

Reform of entrenched, traditional views of curricula was taken up by Harden and Stamper (1999). In their study, they advocated a spiral curriculum as a means to assisting learning. This curriculum encourages the iterative revisiting of topics, subjects and themes throughout the course. It encourages a deepened understanding of a topic with each successive encounter building on the previous one. Productive repetition and constant reinforcement of learned skills was stated to be its hallmark. The study relates to a largely formal system of learning where courses are integrated, learning reinforced and complex ideas imparted in logical sequence with greater depth over time. Traditionalism is challenged but in a very formal, codified manner.

The alignment between more informal curricula with formal competency based curricula was sought by Cottingham et al (2008). Their study once again talked of reform but differed radically from Harden's more codified approach. The authors advocated a school wide culture change to improve the informal curriculum of medical education. The objective of the study was to foster a more caring, respectful, and collaborative culture, enhancing the informal curriculum so it would more consistently embody and reinforce professional values. The synthesis between informal and formal curricula was recognised as being crucial in creating respectful, compassionate and knowledgeable doctors. Importantly, the culture change initiative revealed a sharp increase in students' educational experiences, particularly when compared to historical patterns.

The relevance of informal learning is further discussed by Swanwick (2005) who stated that there were other aspects to learning beyond technical instruction. He encouraged the identification of strategies to enhance informal learning in the workplace in which increased attention is paid to the development of the medical apprentice within a community of social practice. Such strategies were deemed to include the establishment of strong goals, the use of improvised learning practices, attention to levels of individual engagement and workplace affordances, immersion in professional discourse and behaviours, support in relation to the development of a professional identity and the

provision of opportunities to transform social practice. Crucially, Swanwick warned against the wholesale redesign of medical curricula as he perceived the danger of fragmentation reduction in practical experience and a loss of access to social practices. This is an important caveat in the debate because it urges the need for carefully formulated thought when considering reform. Swanwick concisely articulated this by stating that restructuring medical education should not lead to the loss of the processed that facilitate the progression of the medical apprentice.

A study by Harden et al (1999) promoted outcomes based education as a force for good in curriculum development, once again illustrating the point that many different reforms in medical education have been suggested. The emphasis here is on the "product": what sort of doctor is being produced as opposed to the educational process. Educational outcomes should be clearly and unambiguously specified and should determine: the curriculum content and its organisation; the teaching methods and its strategies; the courses offered; the assessment process; the educational environment and the curriculum timetable. If learning outcomes are explicit and clear, the curriculum is easier to mould and adapt to ensure these outcomes can be met.

The advantages of such a system are allegedly numerous. They include: greater accountability; greater flexibility; more self directed learning; greater clarity and a continuity of education. Such advantages have obvious appeal and illustrate the different routes that can be taken to enhance medical education. A study by Smith et al (2007) ties together all of the aforementioned themes in this area. The authors encourage a shift away from past educational methods through a system they have identified but this time with a twist: they are encouraging reform that is inspired from the past. They identify patient centred learning (PCL) through the creation of a virtual practice populated by a panel of virtual patients as a key learning construct. This method is revealed to improve upon related past methods as PCL virtual patients return for multiple visits with their student doctors, demonstrating how diseases change over time, interact with other diseases and risk factors, and are influenced by psychosocial factors. This new approach is deemed to be an improvement as it allows the curriculum to be organised around the patients, both real and simulated. Learning from one's patients is an ancient methodology but it fell out of practice due to its practical limitations. Virtual enhancements in PCL have enabled the regeneration of this entire area.

Study of academic literature has shown the evident need for reform in the use of curricula in medical education. The most suitable method to deploy needs further investigation and its implementation must be carefully thought through; wholesale redesign for its own sake has lucidly been articulated to be of little use. Whilst all junior doctors in this department have a generic curriculum they are supposed to follow, in this department it is not always applicable and therefore learning opportunities are easily lost because they do not formally correlate. The learning opportunities and needs for junior doctors need to be harnessed so they are relevant to their work and own learning objectives.

Project intervention link – To trial a "theme of the week" curriculum which is relevant for junior doctors in the delivery suite and gives a focus for workplace based assessments, whilst ensuring a benefit towards actual clinical practice.

Ward rounds

The fundamental importance of ward rounds and their place as an essential activity for doctors in hospital settings is a matter of fact and not conjecture. Clinicians use the ward round not only to set the working day, but to assess new patients, form a diagnosis and develop a clinical management plan. They are seen as an ideal platform and environment for workplace based teaching and learning to occur and academics have formed a clear consensus. However, there has been considerable debate regarding how the educational value of ward rounds can be improved as there is a sense that the utility of ward rounds is not always maximised.

For example, Kuper et al (2010) noted in their study that there was a clear disjunction between the teaching favoured by staff doctors and the learning valued by their trainees. Staff doctors were of the opinion that they were not imparting medical content knowledge on rounds, but rather that they were role-modelling particular skills, attitudes and behaviours. The study found that trainees primarily wanted to learn content knowledge and that most of them did not value the role-modelling system as much as they valued the acquisition of content knowledge. Clearly, there is a gap in understanding due to mixed opinions that needs to be bridged by further research in order to boost learning efficacy.

The idea that development is needed to enhance ward rounds as an educational construct is emphasised by Norgaard et al (2004) and Qureshi and Swamy (2008), the latter voicing the need for reform in stronger terms. Norgaard's study emphasised the consensus view that ward rounds are a core part of a doctors' hospital activity. The use of a holistic checklist was championed by the authors, and it was considered to be a suitable tool for guiding and assessing performance on rounds. Qureshi and Swamy (2008) cited this checklist in their study and advocated its use on the basis that they felt it provided immediate, objective feedback and identification of areas for improvement.

The tone of this paper was starker than those written by other academics and their findings were at odds with the consensus: A total of 32 (70%) of the trainees disagreed or were uncertain that they learnt something new on ward rounds each day. The authors concluded that the educational utility of ward rounds was not being maximised and

encouraged improvements by ensuring that those leading ward rounds should maintain the interest of all members of the team.

The sharper, more critical tone deployed by the Qureshi and Swamy (2008) study is notably absent elsewhere but calls for reform and development. Walton and Steinert (2010) assert that ward rounds are an opportunity for powerful workplace based learning but state their educational impact needs improvement. They list two concrete suggestions that can aid development including: (1) ward rounds should be facilitated so that as many group members are as actively involved as possible, while being sufficiently controlled to ensure that teaching points are clearly made; (2) whenever possible, the order of patient discussion should be pre-planned so that important clinical issues and specific teaching points are addressed earlier in the rounds, before time pressures take over.

The focus on structure was taken up earlier by Stanley (1998) who considered the situations required to maximise learning on ward rounds. Stanley emphasised the value of structuring discussion time into rounds, in a place out of the hearing of patients and relatives, so that trainers and trainees could take full advantage of opportunities to impart knowledge and discuss prevalent issues in a full and frank manner. Creating such situations leads to an open exchange of ideas, and Bhangu and Hartshorne (2011) took this idea up when discussing the merits of consultant led post-take ward rounds (PTWRs). The authors were able to succinctly show why PTWRs are so important to a junior doctor's development.

For example, it provides junior doctors with invaluable feedback from their seniors and if their diagnosis is changed on the PTWR, it helps engender their own improvement in an appropriately safe environment without compromising patient care or safety which is critically important. This study, like Norgaard's, deals with the assessment of junior doctors and how fundamental that is to maximising educational potential on rounds.

Project intervention link – To trial ward rounds which are learner centred and focused, based on the opportunities available in the workplace and relevant to their role in the delivery suite.

This literature review highlights important and relevant contributions to the evidence base of medical education, specifically those relevant to this project. This literature will be referred to later in the discussion section of this report, when comparing and contrasting to the findings of this development project. It will also be used to help formulate ideas for change and possible adaptations to current practice in the delivery suite to benefit the learning of junior doctors in the future.

Chapter 4 - Research Question in Context

Having summarised the main problems junior doctors were facing in the delivery suite with respect to learning and reviewing many important publications in the above literature review, the main research question/aim that arose was:

"*What interventions can help overcome barriers to, and enhance learning in the delivery suite for junior doctors?* ".

I wanted to ensure that I focused specifically on overcoming barriers that are faced on a daily basis, encouraging teaching and learning to happen in the workplace and proposed a four stage intervention for this project so that hopefully learning opportunities were enhanced for junior doctors in the busy delivery suite. After meeting with junior doctors and senior clinicians in the department, ideas were shared and the conclusion was that a project like this would help in the short-term and have possible have long-term benefits for the department as a whole also.

The above literature review highlights that learning in the workplace is important. Clearly barriers do exist, but can potentially be overcome. For example, having relevant and tailored induction programmes and curricula may help enhance learning for junior doctors. This provides crucial information on how ward rounds can be used as powerful learning/teaching opportunities and thus learners leading or learner centred ward rounds are most effective. Even though the literature provides invaluable information, the evidence base of medical education related to barriers in the workplace to learning and enhancing learning for junior doctors is still limited.

Based on the above, my key researchable question/aim specifically looked at the following interventions for this department/project:

- Theme of the week – Curriculum intervention

- Learner Centred Ward Rounds

- Learner Centred Induction Programme

- Medical Education related teaching in the Department

<u>Chapter 5 - Ethical and Professional Conduct</u>

This project focuses on current practice, the need for change and service development to improve and enhance what is happening at present in this delivery suite, it is not critical of what is currently happening. The department is one in which I have worked myself and therefore know most of the staff members that currently occupy it, including junior/senior doctor colleagues, midwives and administrative staff. For this project I had to seriously consider my personal and professional responsibility as a staff member in the same hospital, a previous member of the team in the department, as a junior doctor's representative for our hospital within the East of England deanery, but more importantly, as an individual person and doctor. Ethical issues may lead to major implications in research, especially if precautions are not put in place (Punch, 2009). Therefore, this section is to specify and highlight the main and any additional responsibilities and considerations needed for this project, even if mentioned throughout the report when applicable.

My personal and professional responsibilities included ensuring the safety of my colleagues and the department whilst undertaking this project. Specifically relating to ensuring anonymity to anyone contributing and also ensuring that colleagues were not pressured into providing biased information before, during or after the interventions. I also had a professional and personal responsibility related to ensuring the barriers that have been highlighted during my rotation, which has sparked and inspired this project, is addressed. Not only is this a duty to improve the learning for other junior doctors, but ultimately, to improve and better care for patients. This responsibility and ethical consideration is not only as an individual doctor, but as the junior doctor's trainee representative for our region. I have to represent my colleagues and ensure their voice is heard, but it is pertinent to keep anonymity and inform colleagues that their views and opinions need to be shared, without risking their professional and career progress. I therefore only included consenting participants and anonymised all data collected.

The common problem I encounter being a representative is that it almost always means receiving the retaliation/arguments of view expression from senior colleagues. It has been stated that ethical issues can frequently arise when there is a clash between personal and professional interests (Easterby-Smith et al, 2002), I will therefore need to be extra vigilant in ensuring this does not happen throughout the project timeline and provide adequate information to all involved and designed an information sheet for those who may participate (Appendix 1).

Even though this is the case and this project aims to help patient care improvement through enhancing learning for junior doctors, it is vital that the department is not seen as a negative place to work or its reputation tarnished by inaccurately publicising the reasoning behind this development project. This is especially important as the department has recently received funding to open the new fertility centre in Luton and my project could influence or

contribute to the feedback received by funders. The negative outcome being funding withdrawal if it is seen as a poor department to work in and provide such specialist patient service delivery. Knowing that I will be continuing to work in this hospital for another 11 months upon project completion, it is important that I do not act in a way that negates the current practice taking place, upset individuals or the department in general and also make others feel that the service and care being provided is sub-standard. Thereby, my initial contact, suggestions, discussions and interventions will be based on a needs assessment, faculty development consideration within the department and aimed at providing regular findings and feedback to all staff members, with the option of modification at any stage if thought to be more beneficial to the development project. I will also ensure participants sign a voluntary consent form to be involved at various stages of the project and emphasise anonymity when applicable (Appendix 2).

The named senior clinicians who will be helping me implement changes and trial interventions for this development project also have important roles in the hospital. Not only are they senior clinicians working in the department with roles and responsibilities related to patient care and service delivery, but also towards education and training for junior doctors and medical students. Their involvement and actions are likely to influence how the department runs, delivers day to day teaching and influences funding from both UCL medical school and the Foundation Programme for junior doctors. If their involvement is seen in a negative light, or my project is portrayed in a negative way, their personal and professional reputations and relations are at stake. All findings, including those with areas for improvement, will therefore be fed back to the department and faculty for analysis and consideration for continual development.

The above are the main personal, professional and ethical considerations that I had to assess and analyse prior to undertaking and also during this project. Even upon completion, I still have to consider the above, as do the clinicians involved. It is important to highlight that patients are not involved, care delivery is not altered and therefore patient care is at no stage compromised. Most of the considerations relate to my colleagues in the workplace and the department, upon discussion with the hospital ethical team and the university of Bedfordshire ethics committee, it was agreed that this project is not primary research requiring NHS ethical approval due to it being an educational development/improvement project and university ethical approval was granted.

Chapter 6 - Methods

Project Strategy

This development project needed to be planned and executed in an appropriate, ethical and efficient manner that does not disrupt the clinical setting, interfere with working relationships, or more importantly, compromise patient care. Even though this is the case, the work undertaken needed to be accurate and reliable, whilst ensuring is was not time-consuming for those involved. Various philosophies and approaches were considered and researched prior to final selection of what would best fit this particular project at this particular time, the rationale behind the decisions were scrutinised for the methods undertaken during the project.

This development project was conducted over a period of three months, initially starting as informal discussions about challenges to learning in the workplace with various colleagues, including senior trainees and consultants and consolidating problems with learning, approaches to improve it and sparking motivation for change with my junior doctor colleagues. Leaving the department as a junior doctor in April 2013 and moving onto my next rotation, I continued to work with senior colleagues in the delivery suite setting to form a faculty and assisted in facilitating initial meetings. This proved to be an extremely valuable and unique experience as I had a different perspective and now looked at what I used to experience firsthand within, from an outside view. Their main aim as a faculty was to suggest, support and implement changes to help benefit the learning of trainees – the emphasis being on regular meetings, problem-solving and commitment to sustaining changes in educational improvement or development. This implementation is a subtle but important difference, the aim is not just to improve teaching skills for clinicians, but more importantly, to focus on enhancing the learning environment within the workplace.

Having encouraged the creation of this faculty, it has given responsibility to named persons in the department, so they now have ownership and a part to play in ensuring this is a continuous process even after this project ends.

By discussing the workplace of the delivery suite with junior doctor colleagues during and after my rotation in this department, it soon became obvious that challenges do exist in the delivery suite and need to be overcome. After highlighting these to the new education faculty, I proposed four interventions as a trial for this project as previously mentioned. After agreement from the faculty, I worked outside of my working hours in my new rotation to form, develop, implement and monitor these trial interventions over a period of ten weeks. This started with the learner centred ward rounds for four weeks, a trial of a "theme of the week" curriculum for junior doctors for four weeks and then ended with the new induction programme for junior doctors starting in the department. Each trial was to continue whilst a new intervention was added in also (Please see Appendix 3). During this ten week period, the topic

of medical education was introduced and discussed in various morning teaching sessions in the delivery suite to help raise awareness of its importance in improving learning for trainees and facilitate improvement ideas for the faculty that has been formed through real-time feedback in the actual workplace.

Before, during and after this ten week timeline, I was closely involved in facilitating, encouraging changes and implementation, and supported the faculty by coaching and progressing different ideas.

Epistemology

The rationale and design philosophy for this project is best suited to a lens of interpretivism. There was some prior knowledge prior to undertaking this project, but a strong belief that a significant amount could still be learnt and unravelled, as answers are relative and multiple, depending on how one undertakes a study and analyses its findings. The project focus relates to the interaction between participants, modified methodology similar to ethnographic data; interviews and naturalistic peer observation in order to find out what the participants truly believe and capturing real workplace learning through lived experiences, this is emphasised within an interpretivism stance. This project also follows the paradigm of critical theory as it is seeking to look at under-represented information related to junior doctors learning in a busy clinical workplace by applying knowledge from social sciences and social-theory in medical education through reflective assessment. It looks to see how it can improve the learning and thereby change for the better, something which is necessary in medical education research (McGahie et al, 2010).

There are also other components of the study that sway towards interpretivism, including the ontology that suggests a subjective reality which changes and its methods and methodology. Having prior experience and knowledge in this department and the way it works which affects the analysis and writing of the findings also fits in well with interpretivism, as does the fact that the findings are constructing meaning from the phenomenon of interest. In this case, gathering data from a variety of people, who all have different views and opinions to be captured. This study's methods are specifically with observed practice or in a sense, modified action research principles through qualitative research forms. It was stated by Bunnis and Kelly (2010) that "different methodological approaches deliberately include and exclude different types of data" and thus these methods provided invaluable information and contributed significantly to this project.

The quality of the research was correlated with a workable sample size. In this department of a single hospital, findings can be followed-up, junior doctors are present and the workplace is likely to be consistent with the same consultants within a department following local guidelines and protocols for decision making (Bligh and Brice,

2008). It also increases the likelihood that changes in educational practice at ground level will take place, something which is noted to be difficult to achieve in medical education research (Cook et al, 2008).

Sampling and data collection

After careful consideration and exploration of options and methods to conduct this project, various research methodologies were used in order to design, implement within and evaluate this educational development project. A prospective cohort observational study was undertaken in the delivery suite at the Luton and Dunstable University Hospital in Luton. It was longitudinal in nature as it followed the same group of people over a set period of time of ten weeks on a weekly basis, with intervals of 1-5 days. The research/data sample was from clinicians currently working in the delivery suite during the months of April to August 2013 (mainly junior doctors, senior specialty trainees and consultants). Vital information was also sought from previous junior doctors working in this department during 2012.

The sampling was specific and therefore only subgroup data was collected to ensure alignment with the project aim (Saunders et al, 2007). In order for the project findings to be an accurate and realistic representation of what happens in the workplace whilst highlighting the impact of the interventions, two main methods for data collection were used – the recording of a faculty debriefing session after the project trial period and personal project diary notes of peer/participant observation as ethnographic data to capture the learning prior to, during and after the projects' ten-week timeline.

The faculty debrief was facilitated by myself, but focussed on ensuring motivation for change and sustaining practice following project completion. It has been highlighted in various previous studies that using focus groups, participant observation and ethnographic data have a strong value in accurate findings for educational development (Atkinson and Pugsley, 2005). Especially to enable one to gain an insider's narrative and observe practice and change as it happens (Barbour, 2005 and Bleakley, 2005).

Participant Recruitment

Participants were allowed to voluntarily opt-in after receiving the information sheet and signing a consent form following a detailed description of the projects' plan and intention. This included any doctor working within the delivery suite setting throughout the duration of the project. It focused on clinicians/participants working within the delivery suite, specifically junior and senior doctors on-call during the day and night in this department, to ensure accurate and relevant findings. Feedback received was verbal and documented by myself for data collection.

Relevance to project and Limitations

The methods were directly relevant to the overall research question, the topic of this project and its aims. The methods allowed naturalistic observation prior to, during and after each intervention trial. It also allowed direct contact with junior and senior clinicians in the workplace and access to the faculty that has been formed and is overall responsible. It attempted to overcome barriers to learning in the workplace for junior doctors with interventions to help improve learning experiences/opportunities. This not only met the main aims and was relevant to the research question, but provided new information to the limited evidence base of medical education on this specific area.

It also enabled junior doctors to lead their own learning through these interventions and methods as it gave them ownership to relay information to the project through the ethnographic data collected and also to the faculty who will continue working on these areas upon the completion of this project. Limitations included these methods being very time-consuming, especially outside of contracted working hours and opportunities to collect data being limited. In order to overcome this, set fixed time with clinicians for the faculty de-brief was arranged outside of clinical sessions and the ethnographic data was collected regularly knowing that collection could be time consuming and opportunistic.

Unanticipated Occurrences

Unanticipated occurrences were considered but not hugely expected, unfortunately the full time-frame for the learner centred ward rounds and "theme of the week" curriculum intervention were not wholly followed through. It was a challenge to encourage all clinicians to participate in the trial as many simply forgot or blamed clinical priorities to override these interventions. Minor modifications were made, gaps were re-timetabled and problem solved in order to ensure sustainability of this project. The full ten weeks of a learner centred ward round was therefore not trialled and probably equated to seven weeks. The "theme of the week" curriculum did not follow four consecutive weeks, it was split over the course of five weeks with only three themes implemented. Planned morning teaching sessions related to medical education topics often has little or no attendance, therefore to overcome this I worked with a named consultant to ensure the importance of this session was highlighted and personally encouraged attendance by at least the on-call delivery suite team from the night and new day team. This meant that a minimum of six juniors should be present at any such morning teaching session.

Purpose

Throughout the course of this project, there were findings at various stages which have contributed to allowing this projects' main research question and aims to be looked at. Due to the main research methods and data gathering being from peer/participant observation and learning from a personal fieldwork notes diary and a recorded faculty debrief session, it was challenging to ensure data collection was focused and specific enough for this particular projects' aims and research question. This section will only highlight the main and relevant findings from these two methods of data collection. The findings were analysed after collating all text and findings both from the peer/participant observation and the faculty debrief recording and common themes/findings collated. These commonalities were then grouped into how they may impact learning as barriers in the workplace and analysed using a lens of an interprevists stance for processing and highlighting the findings, as per the methods suggestion above for this project.

The key findings which focus on overcoming barriers to learning in the workplace and enhancing/improving learning will be detailed in this section. In the discussion section of this report they will be correlated and compared with the research question, project aims and published literatures.

Overcoming Barriers / Learning in the Workplace

This was a generic section being studied during this project prior to, during and after implementing the interventions. This project found that junior doctors have various feelings about morale, enjoyment and job satisfaction. It was dependant upon their rotation, the colleagues they worked with, the learning experiences they encountered and how welcomed they felt within or as part of a team. Prior to this project, junior doctors in this specialty overall felt minimally involved in clinical care delivery and thus felt they were not learning about this specialty, one junior doctor even quoted "especially compared to midwives, they're always given priority for normal deliveries". Even senior clinicians during the faculty debrief agreed that midwives are favoured with learning opportunities, "midwives do prioritise other midwives or their students before thinking about junior doctors learning". From the participant observation, it was found that junior doctors thrived when given responsibility. This made them feel more part of the team and that their role was worthwhile. However, it also gave them ownership over patient care and satisfied their desire to treat patients rather than undertake the same mundane clerical tasks and clinical skills.

It was also found that junior doctors were more likely to undertake these clerical and clinical skills with more satisfaction when given other responsibilities as they feel like they are a core team member with a purpose in this specialty. "I don't mind doing all the paperwork and tta's and bloods and stuff as long as it's not the sole purpose of my existence". If they were unsure they would ask for help or find a resource to provide them the answers, and thus they were always learning. Junior doctors also found it useful when they were given opportunistic learning at the bedside or in the clinical environment, they found this to be very useful and relevant to their daily practice for optimum care delivery. This was also noted by senior clinicians in the faculty debrief, "I think they engaged with the process well and really enjoyed relevant and opportunistic learning opportunities". Being delivered from seniors, they could see its purpose and understood its relevance due to it being current case/patient based learning.

This satisfied junior doctors from a learning experience and job satisfaction point of view. They correlated this learning with them being able to apply it to future clinical practice to improve the care they provide to patients. From the faculty debrief, the findings highlighted that senior clinicians enjoyed the experience of teaching junior doctors in the clinical setting. They believed that it not only fulfilled their duty as a senior, but also gave them the feeling that the juniors were more likely to be safer and competent practitioners having gained this knowledge. "It was nice to see the old tradition of apprentice and teacher back in action, where the juniors actually were interested and saw the importance of the teaching in order to affect clinical practice, I thoroughly enjoyed it". As junior doctors gained confidence and became more integrated, seniors felt they trusted and respected the junior doctors increasingly and saw them more as core team members. "They do feel more part of the team when this happens".

Medical Education – Raising Awareness

The intervention of including the topic of medical education into the morning teaching sessions on the delivery suite was one morning session, lasting for one hour, every fortnight. This project found both from the ethnographic data and the faculty debriefing that the junior doctors and senior clinicians equally enjoyed and benefited from the sessions. Both groups had limited exposure and experience to medical education in a discussion forum whereby ideas and barriers could be discussed and considered for educational/service improvement. Initially there was reluctance by junior doctors as they felt trialling this would have no impact on improving their learning experience. Throughout and after the project, junior doctors felt that these sessions made their senior colleagues "aware of the importance" of the learner, the importance of "learning in the workplace" and how barriers can be overcome such as using interventions trialled in this project.

Senior clinicians felt that they learnt new ways of considering the learner/junior doctor related to teaching, allowing them to lead the learning but also by making the aims of this project and its interventions relevant by providing published work/literature from the evidence base that exists. Both junior and senior doctors felt it would be useful

for this intervention trial to continue, especially by having a junior doctor find and disseminate a resource/paper for discussion and sessions to continue being facilitated by a named senior clinician.

Learner Centred Ward Rounds

The ethnographic data prior to the project intervention of learner centred ward rounds found that the junior doctors grossly felt that it would not work. Not only are ward rounds rushed and busy, but senior clinicians do not take the time out to teach and junior doctors feel too busy and pressurised due to the workload to be able to ask for teaching or even ask questions related to the clinical work. They would rather undertake the administrative tasks and complete the jobs and were always vigilant of their bleep going off for urgent tasks. "The bleep goes off every five minutes, we don't even have a chance to breathe let alone ask for teaching". Senior clinicians however from the ethnographic and faculty debrief felt that this would be a good way of providing opportunistic and "relevant teaching" but shared concerns related to time consumption during the debrief. During and after the intervention trial within this project timeline, junior doctors enjoyed and appreciated being given responsibility of having their "own patient" to clerk and present during the ward round to their consultant, discussing the rationale for investigations and treatment and receiving "on the spot teaching and feedback related to cases" they were involved in. Junior doctors also felt they were learning "a lot more when senior clinicians involved them in decision making related to patients on the ward round" and provided ample opportunities to ask questions or clarify any uncertainties.

Both senior and junior doctors felt it was especially beneficial to ask the learners what they wanted to focus on or gain from the ward round prior to it starting, junior doctors felt the round was then focused on them and gave them an opportunity to meet their learning needs. This allowed them to see patients as a core team member if relevant to their needs, and then present and discuss it with a senior. It also enabled them to undertake self-directed learning upon completion of the ward rounds to consolidate their learning and apply it to future clinical practice. Junior and senior doctors both felt "clinical priorities and patient care was more important than teaching during ward rounds". With modification to the methods and guidance, senior clinicians were advised to "speak out loud" and explain their thought process when making decisions for acutely unwell patients. This gave junior doctors new opportunistic learning that they enjoyed and made them use it in turn on a daily basis during ward rounds to describe, explain and practice relevant narration. The faculty debrief also highlighted the "enjoyment of senior clinicians making ward rounds more interactive and junior doctor focused". It initially was felt that the learner centred ward rounds would be very time consuming and inefficient. Upon completion it was found that junior doctors can be given responsibility of one patient whilst the senior doctor reviews other patients and then joins their junior. In fact the finding was that "it took no longer than previous", non-educationally focused ward rounds.

Curriculum Intervention

The curriculum intervention trial fieldwork findings highlighted that junior doctors felt this would provide some structure to learning whilst outside of the workplace, give some focus on what are the most important things they need to understand and learn to be able to provide safe clinical care and having a "theme of the week" meant that there was always a focus towards their learning whilst at work. Ward rounds, teaching sessions and workplace based assessments could be focussed around this weekly topic. Junior doctors felt this would give them more confidence in this unique speciality as on a weekly basis they would be building their knowledge of this area by following a uniquely designed curriculum for them by senior clinicians.

Senior clinicians felt that this intervention would not work as junior doctors are unlikely to undertake learning outside of the workplace. Thus, when at work, junior doctors would not have the basic understanding to be able to expand upon and apply to patient care. During and after the intervention trial, it was found that junior doctors appreciated and "enjoyed a relevant topic that can be focused upon for workplace based assessments", ward rounds (if patients have the weekly theme condition) and made "a good starting point for discussion with seniors" if opportunistic learning was not occurring. It was difficult to ensure this information was disseminated to junior and senior clinicians and therefore was not always implemented or appropriately used in the workplace. The debriefing findings concurred with this but added that it became "confusing when many interventions were happening at the same time", therefore all interventions or educational development trials need to be synergistic and "clearly explained, with a named person to lead". The faculty debrief also highlighted the "onus being on the junior doctors and senior clinicians to ensure this follows through and that the whole department, including midwives, had to be involved for this intervention to be successful". Senior clinicians were "concerned that the junior doctors would not undertake self-directed learning prior to or during the specific themed week", and therefore the work focussed around the weekly themed "would be wasted".

Learner Centred Induction Programme

The learner centred induction programme findings from the ethnographic data collected prior to the intervention highlighted that junior doctors all felt that the induction they received "did not really benefit or influence daily practice much". This was not only observed as an own lived experience but also as evidence from discussions with junior doctors during this project. Being all lecture-based, it did not give an opportunity to "learn, practice or improve clinical skills which are unique to this specialty such as speculum and pregnant abdomen examinations".

Junior doctors wanted an induction which would make them more "confident with examining and making clinical decisions" based on their findings, from senior and experienced clinicians as opposed to the "classroom" based theoretical one they received at present. Senior clinicians emphasised the "importance of various topics during an induction" but acknowledged that "induction programmes vary depending on who is the main organiser/facilitator" and on staff availability. They agreed on the importance of ensuring sessions were not cancelled due to lack of staff/clinical emergencies and that it should be more evenly distributed to avoid last minute disappointment for the trainees.

Junior and senior doctors concurred that a "structured and uniform induction programme is required to ensure the learning during the induction matches the learning needs of the trainees and may be more applicable over a longer period of time" as opposed to the currently allocated one day. Post the trial induction intervention, junior doctors felt they were now happy to see obstetric patients having being taught some clinical skills in a safe setting by a senior clinician, they felt the content was more clinically relevant to their daily work and that the theoretical learning or classroom learning that needed to take place could be done in their own time if needed.

They understood their roles and responsibilities more and having a junior doctor teach them decreased anxiety for what they previously thought was "being thrown in at the deep end" without support or direction.

The debrief highlighted the difficulty in organising this more complex induction programme as it meant more members of staff were required but felt overall "it was beneficial to the learning of the junior doctors". The senior clinicians also felt that this learner centred induction programme should remain uniform and generic for the initial day/phase and if learning needs changed then further sessions could be undertaken at further dates, but still early enough into the rotation to be classed as an induction. It was also found that for the induction programme to take place, a junior doctor had to cover the delivery suite and all women's health wards throughout the whole day, similar to an on-call weekend shift. This "overworked that current junior doctor" and was a big concern for the clinicians in the faculty debrief.

This section will summarise, critique and analyse findings by making them applicable to this project and ensuring to evaluate and consider its educational and professional impact. This will be done by relating it to the projects' main research question and aim, comparing and contrasting the project findings to the published literatures and engaging with relevant theories and concepts. To conclude the report, it summarises limitations and future development work at the end of this discussion and explores action orientation for future practice.

Overcoming barriers to learning

In this part of the report, overcoming barriers to learning and enhancing learning opportunities will be explored. This section does not look at any specific intervention, those are addressed later within this same discussion as separate sub-headings.

A key barrier found to do with learning in the workplace in this project was junior doctors perceptions of the workplace, feelings related to morale and their job satisfaction. It was associated with how welcome/integrated they felt as part of a team and also believed this affected their learning experiences. It has been well documented in the literature that support and education by institutions is poor for junior doctors as they first enter clinical practice (Luthy et al. 2004). Transitions as a junior doctor not only occur when one qualifies, but is an ongoing regular process that can be hard to adapt to when rotating through different departments (Kilminster et al, 2011). During this project, another key finding was that junior doctors felt that midwives and midwifery students learning opportunities were prioritised over theirs, meaning that they were undertaking the same clerical and clinical tasks rather than being exposed to new clinical activity.

This finding is not unique, similar examples of unequal workplace learning affordances have been documented by Billet (2001). If learning opportunities and transitions are improved, there is also a link to better morale and job satisfaction, thus improving patient care (Tucker et al, 2003). The literature also agrees with the finding of this project that when given the opportunity and clinical responsibility, junior doctors thrive in this environment and enjoy the application of knowledge to the workplace (Haller et al, 2009). It has been noted that these factors combined influence and affect the learning opportunities and processes in the workplace (Prince et al. 2004).

This project also found that junior doctors really enjoy and appreciate being given responsibility and opportunities to be more involved in patient care. It not only makes them feel part of the team, but also enhances their learning in the

workplace by asking questions, seeking guidance when appropriate and continually putting knowledge into clinical practice. They especially found opportunistic learning at the bedside or in the clinical environment helpful and relevant and senior clinicians agreed that the engagement by junior doctors was positive, as was the experience. Junior doctors appreciated having a senior to not only teach, but mentor them, by using real examples and making the learning continually relevant for their job role. Seniors felt their juniors were increasingly more integrated in the team during this project and were almost like an apprentice to them and thus they could trust and respect them more, one even quoted "They do feel more part of the team when this happens".

These findings can be linked to and have been well documented in the social theory literatures of Lave and Wenger (1991). Specifically relating to the theories of "Legitimate peripheral participation" and "Communities of practice", these findings can be linked to social theory and put into context for junior doctors in the workplace and correlates with the educational and professional impact of the findings.

The involvement and participation of junior doctors is a significant factor associated with learning in the workplace. One must remember that "Peripherality" is a way of learning that protects the individual by limiting exposures and experiences to what is relevant and appropriate at the time, however, during this specific, or other rotations, it should be used in the positive way as described by Lave and Wenger, so that one can become more integrated and involved (Lave and Wenger, 1991). At present junior doctors do not actively involve themselves in the workplace learning opportunities unless they are made explicit, in this project, these opportunities were highlighted and thus they were utilised. If they now become more engaged in the workplace and participate more actively, they will be able to learn and gain from the available learning opportunities. The more engaged junior doctors are in the workplace and the more they participate, the more it will benefit their learning. They are also increasingly likely to become a member of the community in which they are practicing. It could be described as moving from "legitimate peripheral participation to full engagement". A prime example of this which is supported by Lave and Wenger is "Increased access of learner to participating roles in expert performances" which is displayed in the delivery suite by the junior doctors inactive roles, the expert performances are exposure to a real life working day and its opportunities during this project (Lave and Wenger, 1991).

It has been proposed by Lave and Wenger (1991) that learning only takes place within the workplace, as knowledge is situational. If junior doctors were made aware that learning takes place opportunistically based on patient presentations to hospital and to maximise the learning opportunities actually available to them, attitudes towards learning, engagement with learning and received teaching may change. This is supported by Illing et al (2008) who found that experiential learning is the best way for doctors to learn. In educational context and impact terms, this shift in practice could have significant impact in terms of improving learning and teaching attitudes and

opportunities for junior doctors in the delivery suite. It would encourage "workplace recontextualization" by actively engaging in learning through the workplace environments (Evans, 2006).

Learning the language of the community in which one is practising is a key necessity to be able to communicate within it and therefore in order to become a legitimate members of that community (Lave and Wenger, 1991). This specialty overall and the delivery suite specifically, is an environment where there are many unique terms and abbreviations that are used on a daily basis. This is not taught prior to working in this environment unless one has rotated in that department previously, most junior doctors have not. It has a significant educational and professional impact not only as a gap in knowledge for undertaking their roles as junior doctors, but possibly may compromise and impact patient care. An intervention to address and overcome this is therefore urgently needed.

A successful community of practice needs clarity by all individuals on their roles and responsibilities, including how their place fits into that community. One problem faced at present is the lack of clear direction and roles of junior doctors in the delivery suite, due to different daily workloads and clinical priorities. During this project, by having specific roles and responsibilities and making learning opportunities explicit, some clarity was found. Another important educational and professional impact that was found and needs to be addressed moving forward is that junior doctors need to be given an "identity and membership" to join this community of practice (Lave and Wenger, 1991). This can be achieved with the "apprentice" type or working as in this projects findings or other development strategies.

The findings above relate to learning in the workplace being improved, especially by overcoming present barriers to learning. This project has found and been supported by the literatures that barriers can be overcome. The findings above can relate to the main research question/aim specifically by highlighting that learning in the workplace has been and can be improved. It is now a case of the faculty addressing what areas are the main barriers, working to address how best to overcome these, but more importantly, to sustain these if successful.

Not only do the findings above relate to educational and professional impact for those in the workplace now, but also importantly for doctors who will be rotating through this department in the future and crucially the impact it has on patient care. The theories of Lave and Wenger related to "Legitimate peripheral participation" and "Community of practice" are very appropriate in the sense that these findings show need for improvement and by using the above theory, learning in the workplace could be significantly improved for junior doctors.

The aim of this intervention stemmed from the literature review intervention link of aiming to improve learning in the workplace by raising awareness of medical education and the importance of learning for junior doctors. The ultimate aim was to allow junior doctors to have an open forum to discuss barriers to learning in the workplace, suggest changes, use the evidence base of medical education that exists to work in partnership with other colleagues in order to improve learning opportunities. This is supported by the Boor et al (2006) paper which concludes that learning experiences for junior doctors should be positive ones, and their working environment has a significant influence on this experience. There were very few who had exposure to formal and evidence based medical education prior to these sessions outside of being a leaner themselves. Gray and Aspland (2011) suggested that junior doctors are more likely to be willing to and enthusiastic to work in the clinical environment if they have an opportunity to help shape and tailor it to their needs. From a medical education point of view, this is crucial towards the needs of the learner and if learning needs are addressed prior to future interventions, outcomes could differ significantly compared to those not addressed/considered.

Initially, junior doctors were sceptical about the use of these sessions in order to benefit their learning opportunities by overcoming barriers to learning. They felt that senior doctors would not take it seriously and thus it needed named responsible clinicians for success. Having a faculty created from this project ensured that this happened prior to the intervention. During and after the intervention trial, junior and senior doctors concurred that not only was this experience and exposure enjoyable and refreshing, but crucial in order to benefit the learning of junior doctors. Development of clinicians and the environment is necessary to benefit learning/teaching (MacKinnon, 2001). This project found that towards the end of the process, using examples of medical education literature and resources not only gave a starting point for discussion and relevance to this workplace, but also allowed discussing regarding overcoming current barriers and options for improvement to be facilitated. These findings are supported by medical education literature. For example, Swanwick and Plint (2006) suggest that as junior doctors' needs are addressed and learning improves through new initiatives made in partnership between them and their colleagues to improve workplace learning, so does the performance of junior doctors. This is further supported by two separate studies which highlight that high level of teaching quality and continuous improvement directly benefits learners (Bell, 2001 and McMahon et al, 2007).

The above findings supported by the medical education literatures directly relates to the research question and aim for this project. Including the topic of medical education into teaching sessions not only gives all doctors the opportunity to learn more about medical education and explore the evidence base available, but also allows one to consider its contribution to their own practice. Related to this project specifically, it allows junior doctors to discuss the barriers to learning in the workplace, work on ways in partnership with senior colleagues and named faculty

members to overcome these and thus enhance their learning in the delivery suite. This intervention successfully helped address the research aim, by providing a platform/forum for addressing concerns and problem-solving to improve the workplace learning environment alongside the other interventions.

It had a significant educational and professional impact due to it being a unique intervention that engaged doctors with little or no training in medical education, empowered them to learn about the evidence base that exists and support propositions for changes or trial interventions.

If this trial intervention is utilised by the faculty and based on the faculty debrief suggestions, it is, this could have a beneficial impact on education and professionalism in the department both short and long term. If used to benefit learners and is junior doctor led and driven, but facilitated by senior clinicians, it could potentially have a significant long term impact on the education and training experience in this department. Feedback from the foundation programme and general medical council surveys have been grossly negative related to teaching and training in this delivery suite for junior doctors. Having this intervention means the wider team are aware of the medical education topics, the evidence base that exists and a platform for discussion and problem solving together as a team to enhance their workplace for learning made available. If this is continually undertaken and barriers are overcome, learning opportunities and learning experiences may improve and thus the feedback to these governing bodies for the department potentially could change. The success of this intervention could see the formation of a "Community of practice" as described by Lave and Wenger (1991) not only for the faculty overseeing the work, but also for those involved at ground level. This will have a significant professional impact for the department not only from a hospital point of view, but as a specialty on a national basis. Pioneering this intervention and having it trainee led gives ownership to the juniors to be involved in leading their own learning, this could be presented and modelled nationally to help improve applications to this less popular specialty as a career.

This project only looked at teaching sessions that occurred this timeframe and limited its value because many were new to the intervention in terms of its relevance and opportunity to help shape practice. In the future, monitoring facilitated sessions over a longer period of time would be useful.

Encouraging junior doctors to take the lead earlier on or having senior clinicians facilitate and bring together resources at an earlier stage may also have changed the findings. Much of the resources were provided by myself and the initial sessions were also heavily facilitated with my input. It would be interesting to observe this practice as it continues and analyse future findings now that the department have taking ownership of the intervention and plan to continue using it in their teaching timetable. Further research into the existing evidence base and further work into the benefit and use of teaching related to medical education with relation to enhancing learning in the workplace or improving learning for junior doctors and overcoming barriers to learning needs to be undertaken.

Learner Centred Ward Rounds

The findings of this project highlighted that prior to any interventions, junior and senior doctors had different views on whether the learner centred ward round intervention would work or not. This is an important finding which has been documented in various studies, including the one by Kuper at al (2010) where the difference in learners and teachers expectations from what can be gained from ward rounds was vast. Junior doctors felt that they were under too much pressure in the busy workplace and would not be able to turn them into teaching ward rounds. Senior clinicians however, although agreeing with time restraints, overall thought differently. They felt it would provide good exposure to relevant and real clinical cases, providing opportunistic learning and teaching which is appropriate for the day-to-day tasks at hand. The literature suggests that ward rounds are a core part of a doctors daily activity, therefore it provides significant learning and teaching opportunities (Noorgard et al, 2004). This concurs with the finding during this project that senior clinicians could see possible learning opportunities available from this intervention, junior doctors could not. Relating to educational and professional impact, it highlights the difference between seniors and juniors perceptions to learning opportunities, specifically as the learning is not made explicit. This will need to be considered for any future work taking place and for workplace learning enhancement.

During the project, junior doctors changed their views on the intervention and enjoyed the new focus and exposure, especially the teaching and feedback received from senior colleagues. The fact that views and opinions were changed shows the benefit of this project and this intervention, proving that there is scope for improved practice and that junior doctors do have improved learning experiences with an intervention such as this one. The fact that the findings in this project have shown improvement in learning for junior doctors means that workplace development took place in real-time during this timeframe, this is something supported heavily in the evidence base of medical education (Bradley, 2006). Even though time consumption was a concern prior to the intervention, in reality, there was not much difference in ward round times at the start and end of the project. Having a junior doctor focused ward round enabled self-directed learning and clarification afterwards and consolidated the learning that was taking place. A study by Khan et al (2011) supports this finding, where consultant feedback in a safe environment for the junior doctors without compromising patient care benefited their learning process. This finding is not uncommon amongst the limited evidence base related to ward rounds in medical education, Walton and Steinert (2010) also found this but mentioned that the educational impact it can have does require improvement. Feedback provided to juniors has been proven to be successful in this project and in the literatures, for educational and professional impact to enhance learning for junior doctors, this needs to regularly take place and be sustained.

Both senior and junior doctors felt it was especially beneficial to ask the learners what they wanted to focus on or gain from the ward round prior to it starting. Junior doctors felt the round was then focused on them and gave them an opportunity to meet their learning needs, thus helping enhance their learning experience in the workplace.

The above combined has a significant educational and professional impact, not only were the findings able to display an improvement in the working between junior and senior doctors, with explicit learning opportunities through ward rounds, but more importantly, it has shown that learning experiences can be enhanced with interventions. This directly links to the research question/aim and is supported by literature to suggest long-term benefit - the likelihood that changes in educational practice at ground level will take place is increased, something which is noted to be difficult to achieve in medical education research (Cook et al, 2008).

Even though the findings in this section answer the research question by meeting its aim in terms of outcome, it is still pertinent to consider the educational and professional impact that still remains. A learner centred ward round does seem to help overcome barriers to learning and in this project, did help improve learning opportunities for junior doctors. Ward rounds consist of a series of complex tasks which require more than medical knowledge, namely: inter-personal skills, clinical technical skills, patient management skills and communication skills (Nikendei et al, 2008). A good structure can help maximise the learning that could take place during ward rounds (Stanley, 1998) but more importantly, the learning needs to be made explicit. This can be done by overcoming these barriers to learning as previously discussed using the theories of "Legitimate peripheral participation" and encouraging the junior doctors to join the "Community of practice".

Evidence suggests that learners benefit from and enjoy patient interaction (Swanwick and Morris, 2010), it creates a positive learning environment and experience for learners (van Hell et al, 2009) and this report also describes that as a key finding. Not only does it also increase participation but encourages them to become more part of this "Community of practice" (Lave and Wenger, 1991). They can then work alongside their colleagues as one, providing optimum patient care by learning from them, including through transfer of skills.

A significant amount of work still needs to be undertaken related to maximising the learning opportunities available from ward rounds. Once tailored towards the learning needs of the junior doctors by making the learning explicit, there will be better educational development than what was achieved during this project.

Curriculum Intervention

Prior to any intervention trial during this project, a key finding that has been highlighted was that junior doctors felt that their learning experience in this department is currently unstructured and unclear. The use of a curriculum that is designed by senior and experienced clinicians may provide them with some focus on the relevant topics in order to provide better clinical care for their patients, mainly as it would provide a focus on self-directed learning in their own time. The idea of a "theme of the week" was received positively, as it would enable a specific focus and allow

theory to be put into real practice through patient presentations within the department. Junior doctors want patients to be the focus of their learning and this is supported by Smith et al (2007) where a curriculum designed around "patient centred learning" proved to be a successful method of learning that has greater flexibility and continuity of learning for learners long-term.

A study by Swanwick (2005) highlighted that a curriculum can be something that the workplace is either asked to follow, or, something which arises as a result of the activity in that workplace. In this project, the curriculum intervention is something that has arisen due to a need for improving learning in the workplace, but also in this project, trialled as something to follow by the department. What this project intervention does not consider, is the benefit of informal learning as described by Swanwick (2005). Informal curricula content can engage and allow learners to further become part of the community in which they are practising, in this case, junior doctors in the delivery suite (Lave and Wenger, 1991). This is something that would have an important educational and professional impact long-term and should be addressed through further research and work in this area.

Junior doctors also felt that this weekly themed curriculum would slowly increase their confidence in dealing with this patient demographic as it would allow their knowledge to build gradually and gives a relevant purpose to ward rounds, workplace base assessments and opportunistic teaching/learning in the workplace. The fact that junior doctors thought this is no surprise, literature related to curricula in medical education also has similar findings when considering spiral curricula. The repetitive nature of revisiting topics and constant reinforcement of knowledge and skills makes this curriculum successful (Harden and Stamper, 1999). The initial response from senior clinicians related more to their lack in confidence in junior doctors undertaking self-directed learning related to the curriculum and thus, senior clinicians not being able to teach or focus on the selected themes due to lack of preparation/prior knowledge by the junior doctors. Ultimately this could lead to a lot of hard work related to this intervention being wasted. In the literature this relates to a formal and informal curricula as described by Cottingham et al (2008), where even though reform is mentioned, it requires professional values being reinforced. The difference in expectation from a curriculum between learners and teachers varies and therefore the opportunities and benefits need to be made explicitly visible and available.

This project had significant findings related to improving learning in the workplace for junior doctors. It was found that junior doctors found the use of a relevant curriculum helpful to focus their own learning as well as that received from clinicians in the department. Not only was it enjoyable for their own learning, but it benefited them by providing a focus for workplace based assessments and senior clinicians undertook opportunistic teaching related to the curriculum during the learner centred ward rounds and through patient based teaching discussions. What was not covered and lacks in this project intervention compared to the literature is the use of outcomes based learning.

If used correctly, a study by Harden et al (1999) suggests that making learning outcomes explicit and clear can enable curricula to be more readily followed and therefore, has specific results in terms of end product. This was not considered during this intervention trial but should be considered for the future, a breakdown of designing detailed curricula for the department with outcomes, may prove to be more successful. Those following an outcomes based curriculum would have mastered what is required and therefore can succeed/progress upon completion (McNeir, 1993).

Not only do the findings of this project directly link to the research question/aim as there was improvement in learning opportunities and learning practices in the workplace for junior doctors, but more importantly it was very well received by the faculty and staff alike and there is scope for future development and implementation based on junior doctors needs. It specifically addressed the fact that a barrier related to lack of direction/lack of curriculum meant that junior doctors were not experiencing learning opportunities in a way they expected or would have liked. This trial has engaged and addressed it in a brief enough manner to enable and empower the department to now adapt it and make it sustainable, based on the findings here and supporting literatures.

The educational impact this has had immediately highlights that junior doctors want to learn about the department they are in and with encouragement and a structured focus, the learning is made explicit and thus the workplace learning environment has improvement for them. Long term, if implemented correctly, it could significantly change the perception of opportunities/learning that can be achieved within the workplace. If there is a focus for self directed learning and opportunities for application to workplace based assessments, an already mandatory requirement for junior doctors successful completion of the rotation in this department, mindsets could be altered. If the focus provided an incentive to the junior doctors in terms of formal assessments, and successful completion of rotations by engaging in this process, uptake and motivation may differ.

The professional impact it will have can be linked to the outcomes based curriculum, whereby the design of the curriculum is shaped on what outcomes need to be achieved. This can be tailored to provide a variety of generic skills in order to provide high quality patient care, communication skills and teamwork within the department and other non-technical attributes related to professionalism (Stenhouse, 1975).

During this project it was found that there was difficulty in application and implementation of the original intervention proposal. It was not disseminated appropriately across all levels and not all of the themes could be covered during the project period. It was also found based on faculty feedback that many interventions taking place at the same time proved to be confusing for staff members and therefore in the future meticulous planning will be required as will clearly structured guidance, plans for implementation and named persons ensuring its correct implementation. It would also be useful to observe the curriculum over a longer period of time, so that if there were

delays or obstacles encountered it would not disrupt findings significantly. Having this intervention on its own, rather than alongside other interventions may also alter the findings/outcomes, a separate project undertaking this may prove to be useful to assess curricula in enhancing learning in the workplace for junior doctors and more aligned to the research question/aim for this project.

Learner Centred Induction Programme

One of the main findings as a direct result of this project being undertaken was the highlighting of junior doctors lived experiences and perceptions of the departmental induction programme to the faculty. Junior doctors did not feel that the induction programme that was currently in place meets their needs or provides them the information and skills required to benefit their daily practice as clinicians.

It was felt that the induction programme did not add much value to what they already knew, thereby did not change their daily work even though this is a very unique speciality/department to most others. This finding during the project is supported by medical education literature, where it has been found that junior doctors lack of preparedness for working can be a direct result of poor support, guidance and induction within the workplace (Brown et al, 2007). Junior doctors highlighted that the induction programme did not give them the opportunity in order to learn, practice and develop relevant clinical skills. They highlighted that an induction programme should improve their confidence and ability in clinical decision making and felt that this needed to be done practically rather than just through lectures. A study by Evans et al (2004) supports this key finding, they also found that during induction programmes junior doctors lacked confidence and also perceived clinical skill ability. However, upon completion of appropriate induction programmes, the negativity towards confidence and perceived ability changes drastically. Brown et al (2007) mentions the importance of giving junior doctors the support in order to make a confident start at interpreting and undertaking their roles, this further supports the above findings and highlights the need to stress the supporting role that induction programmes can have.

With the above known, senior clinicians agreed that induction content is important for junior doctors learning, however, highlighted that induction programmes do vary depending on the lead clinician/organiser and staff availability. This proved that the induction programme was not fully learner centred. Literature suggests from a study by Donaghy (2008) that induction programmes which are not standardised and robust are more likely to face problems in the future, including poor guidance and support for junior doctors as it is unlikely to be a learning enabler. Both junior and senior doctors during this project agreed that a structured and uniform induction is required, based on the needs of the junior doctors and its relevance for application in daily clinical practice, thus matching the evidence base that exists. This is further supported by literature, "standardisation and consistency are key

components" to structured learning (Nathavitharana, 2005). Induction here may therefore need to be longer than the currently allocated one day.

The trial intervention was an induction programme after seeking input from junior doctors on what they would have liked included during their initial induction prior to working within the delivery suite setting. Topics were chosen to supplement the current induction programme and included practical sessions related to patient case presentations such as abdominal pain in pregnancy and hands-on clinical skills such as speculum examinations. Overall, junior doctors and senior doctors agreed that this induction programme made the new doctors in the department more confident in their roles and responsibilities but also in clinical ability. Evidence suggests that if induction programmes are clear on what content is to be covered and are efficient, they are increasingly likely to be successful (Nathavitharana, 2005), which is why this trial might have worked. It was over a set period of time and based on what current junior doctors would have wanted during their inductions.

This intervention may have also worked well relating to the findings of senior colleagues and faculty expressing their increased confidence in ability of the junior doctors following this induction because of the social theory aspect of this intervention. If one considers the roles of junior doctors in the workplace, prior to starting and during the initial stages within a new department, the success of an induction programme can encourage "legitimate peripheral participation". This not only makes them feel engaged, inspired and already part of the workplace before they even begin working, but it also prepares them for the role they are about to undertake (Lave and Wenger, 1991). This theoretical stance can be explored further, by related the junior doctors as part of the "Community of practice" they are about to join in this new department. By having an induction programme which teaches them about the department, prepares them for the role, teaches working practices and the unique language of this specialty, they are more likely to be accepted within and seen as part of this "community of practice" much quicker (Lave and Wenger, 1991).

This was not fully considered prior to this intervention during this project and would be crucial to explore and consider prior to any future work. This could have a significant educational and professional impact as not only would the learning be more relevant for junior doctors and allow them to increasingly be prepared for the role they are about to undertake, but it would also improve their professional role within the delivery suite. This induction programme could improve their confidence and ability whilst also giving them the knowledge, skills and resources in order to become part of the "community of practice" quicker and thus feel themselves and be perceived as part of the professional team in a shorter space of time.

This intervention related directly to the research question/aim as it found that induction programmes were a barrier to learning in the workplace for junior doctors. The intervention during this project also found that the induction

programme can be improved so that it is more junior doctor focused and thus can improve their learning in the workplace.

What this project did not study was multiple induction programmes, by only observing one rotation, one cannot analysing findings from recurrent induction programmes. This would have been helpful to analyse in terms of findings prior to making decisions for future planning. As mentioned earlier, a structured and uniform programme is needed to ensure success, in the future a programme must be made based on the learners needs and distributed in advance. This project unfortunately did not have the capacity to do it as its own new programme, it supplemented an existing induction programme with more junior doctors needs based input being taught by experienced/senior clinicians. Another consideration for future practice would be peer led teaching as opposed to senior clinician involvement throughout. Evidence suggests that peer led teaching and learning is highly effective (Buckley and Zamora, 2007) and therefore the outgoing junior doctors teaching the incoming junior doctors may be more effective than just using senior clinicians.

This is something that should be looked into not only from the existing evidence point of view, but also for future projects being undertaken as it may be able to further benefit the educational and professional impact of this intervention beyond what was found during this project.

Summary – Did these interventions meet the research question?

All four interventions met the project question and aim. Not only did it find that there were barriers to learning in the workplace, but with the interventions, it actually began to overcome them. The learning opportunities and workplace based learning did improve through these attempts during the project and feedback received from the junior doctors, senior clinicians and faculty debrief was grossly positive.

To answer the research question related to this project, interventions trialled here included the "theme of the week" curriculum, learner centred ward rounds, learner centred induction programme and the introduction of medical education into teaching sessions, to raise awareness. These four interventions do seem to have helped overcome barriers to learning and thus improved/enhanced learning in the workplace for junior doctors.

Limitations

The above text highlights many key findings which probably would not have been found if this medical project was not undertaken. Even though this is the case, there were still many limitations encountered that affected the project

and thus its findings. One key limitation to undertaking this type of educational development project was time constraints, in allocating time for the project to be undertaken around personal clinical commitments, workload and priorities. Additionally participants' were restricted for time also. It was challenging to undertaken participant observation over a long period of time without there being frequent disruption or clinical emergencies taking precedent.

Clinicians were also very difficult to track down and arranging time for one-to-one conversations or the faculty debriefing session was also challenging. The methods used during this project were limited in the number of participants observed, numbers of workplace sessions observed and also limited in the faculty debriefing. If more workplace sessions and participants were observed, there may have been different or more detailed findings that could have contributed towards this project. Additionally, increased frequency of debriefings with the faculty throughout the process could have provided better findings related to educational and professional impact. Therefore, for future work, it is recommended that increased frequency of observation and more faculty debriefing sessions throughout the process are undertaken. The use of questionnaires could also help contribute if the above is impractical. Changes could have actually been made during the project, rather than summarising and suggesting changes afterwards, as is in this case.

Many colleagues and participants in the workplace believed this projects' findings will have no influence or impact on future training. Therefore, the findings could have been biased by pre-assumptions of participants. The medical education raising awareness intervention did seem to help but may not have contributed enough during the project.

The final limitation was the research methods using during this project being a new and unfamiliar territory for myself. During the project, the methods of data collection were being used in this capacity for the first time and findings collated and prepared for analysis, presentation and discussion both within in the scope of this project report and also as part of the wider development of the department by discussion with the newly formed faculty. Therefore, only limited data was collated, analysed and used as applicable for this project. For future development/projects, different types of data collection or methods/methodology could be used such as questionnaires being in addition to the above methods, more debriefing recordings and analysis and exploring other options/interventions to attempt overcoming barriers to learning and improving learning for junior doctors.

Action Orientation for Future Practice

Further work still needs to be done in this area to gather more data related specifically to junior doctors working in the delivery suite setting but also in general related to learning in the workplace for junior doctors. This would not

only allow comparisons between the single findings of one department, such as in this project report, but to generalise findings across other departments and other specialities. The evidence base related to learning in the workplace, learning experiences related to ward rounds and curriculums and the use of learner centred induction programmes in the delivery suite setting is very limited. This project contributes towards it, but extended work is required to help shape future practice locally and possibly nationally, depending on future findings and intervention trials.

In terms of action orientation for the current faculty within the department to move forward relies on a team of people motivated to see change implemented and sustained. The following have been suggested as a starting stage in order to benefit the junior doctors within the department and see continual improvement in the delivery suite:

- Review and analyse the evidence base that exists related to learning in the workplace for junior doctors, peer led learning, induction programmes and junior doctor development through "Communities of practice".

- Plan to undertake the same or different interventions based on junior doctors needs but over a longer period of time, in order to gather more data and analyse findings and compare with those of this project.

- If multiple interventions are planned, space them out or make sure named persons are allocated and given ownership in order to avoid confusion and prevent miscommunication/inadequate implementation.

- Compare induction programmes throughout the year, therefore collecting data from multiple trials for finding analysis and pattern recognition in order to find what truly makes induction successful.

- Induction needs a clearly set and structured programme that is visible, based on junior doctors needs. Its own programme should be trialled rather than that trialled during this project.

- Gathering data over a longer period of time would not only help strengthen findings, but also help find more areas for improvement, something which would significantly change educational and professional impact within the department.

- Involving midwives in the project would enable more teamwork, communication across various healthcare professions and improve multi-professional learning, thereby possibly overcoming the barrier of disproportionate learning opportunities.

Chapter 9 - Conclusion

Junior doctors have a stressful and challenging role following graduation and this continues on a regular basis as they change departments. Working in the delivery suite is a unique area that has its own special practices, a very busy environment and frequent medical emergencies which can be life threatening for mother and baby.

Learning in the workplace can be difficult for junior doctors, especially in the delivery suite when barriers to learning are commonly faced. If these can be overcome then learning can be enhanced/improved for junior doctors. For this to happen, learning needs to be made explicit and the workplace needs to be aware of barriers so that a faculty for example, can work in partnership with junior doctors to problem solve and thus improve workplace based learning.

Intervention trials can help highlight and begin to overcome barriers to learning in the workplace and thereby begin to enhance learning in the workplace for junior doctors. Junior and senior doctors alike recognise the importance of learner centred teaching/learning, opportunistic learning that is relevant and the need for integration into the department/team. Learner centred ward rounds, curriculum interventions, and learner centred induction programmes are interventions that are not only felt to be needed by junior doctors and senior clinicians in the delivery suite, but from this project, found to be received positively and begin to change workplace learning affordances and perceptions. The discussion of medical education in teaching encourages faculty and junior doctor working partnerships to improve and sustain changes for the benefit of the learning for junior doctors in the workplace.

Further review of existing literature and more projects related to the findings of this project need to be undertaken to benefit junior doctors learning even further.

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Appendixes

Appendix 1 – Project Information Pack

'*Overcoming barriers to learning for junior doctors in the delivery suite: a case study.*'

You are being invited to take part in a research project to investigate and analyse whether certain medical education interventions can help enhance the learning and overcome barriers to learning for junior doctors in working in the delivery suite.

What is the aim of the project?

The overall aims of the project are to increase understanding of what current learning on the delivery suite it like, what barriers exist and how they affect learning and whether some interventions to try and overcome these barriers can help enhance the learning experience for junior doctors working in our busy delivery suite. If these trial interventions work, there may be a place for medical education reform in our department to sustain life-long learning in the delivery suite and improve learning experiences for our junior doctors.

The interventions I will be trialing include:

- Implementing a theme of the week curriculum (TOTW)
- Implementing learner centred ward rounds (LCWR)
- Implementation of a new induction programme
- Including the topic of medical education into morning teaching sessions

What will participants be asked to do?

Should you agree to take part in this project, you will be asked for your consent to have a medical educational faculty de-briefing session recorded (consultants only), your ward rounds observed with notes recorded on the teaching/learning interaction taking place only (not on clinical work), morning teaching sessions on the delivery suite related to medical education observed and notes taken on the nature of discussions and teamwork related to problem solving (not on clinical discussions) and finally some informal discussions related to junior doctors learning and barriers to learning in the workplace may take place where informal notes may be taken to lead more research and discussion related to this project.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do not decide to take part, please let the researcher know as soon as possible (see contact details overleaf) or prior to a research observed session. The researcher will ask you again on the day if you are still willing to participate and then ask you to sign a consent form in his presence. However, you are still free to change your mind at any time during the life of the project without giving a reason. If you decide not to take part, or to withdraw your data at any time, it will not affect you in any way.

What data or information will be collected and what use will be made of it?

The data will be variable and involve mainly qualitative data. I have specifically chosen this type of data collection and analysis as I feel it will provide more honest, open and engaging input and feedback from those within the department as opposed to tick-box questionnaires.

Data will be from:

- A recorded faculty group de-brief session either during or after these interventions (Consultants only).

- Project diary notes, mainly ethnographic data I will be noting during the project when interventions are implemented and afterwards.

- Supplemented data from informal discussions with junior doctors and non-faculty members of the delivery suite before, during and after the interventions. Including discussions with new trainees entering the department based on the induction programme and their thoughts on the theme of the week and learner centred ward rounds when they are to work in this department.

Will the information I give be kept confidential?

The recordings or notes will not be made available to anyone outside yourself, your session co-participants and the lead researcher. If you would like to view your own recording within the hospital premises, the researcher will construct a temporary edit that features your presentation only and not that of your colleagues. The data will be kept in a locked drawer in the researcher's office and contact details or digitised audio files will be kept in a password protected file on the researcher's computer. Neither your name nor any other identifying details will be recorded on any data produced. One copy will be made of each recording in case of loss or damage which will also be stored securely.

All data will be deleted at the end of the project (October 2013) by the researcher, except a audio recording of the de-brief session which may be kept in the hospital for research governance purposes. Results of this project may be

verbally presented or published in academic journals including short anonymised transcribed extracts of talk, but any data included will in no way be linked to any specific participants.

What are the possible benefits or disadvantages of taking part?

This project will provide the opportunity for you to give us some valuable insight into the nature of barriers to learning in the delivery suite and whether interventions can help overcome these. During the recorded and observed sessions and on your request, you will have the opportunity to access your own data for reflective purposes. The researcher will be inviting all participants to feedback sessions towards the end of the project to discuss the findings of the project and their practical application. In terms of disadvantages, some people may feel more self-conscious when they know they are being recorded or observed, this may cause clinical duty to take longer than usual or in small cases be of a different standard than usual.

Dr Vikas Acharya, Foundation Year 2 Trainee (Project Lead)
Ms Shahnaz Akbar (Lead Consultant supporting project and College Tutor)
Ms Samita Das (Supporting Consultant and Faculty Lead)

Contact for further information

So that I can answer your questions or comments about our project, either now or in the future, please feel free to contact me: -

Vikas Acharya

Foundation Year 2 Doctor (Dept of Paediatrics)

Luton and Dunstable Hospital

Lewsey Road

Luton, Bedfordshire

LU4 0DZ

Email: vikas.acharya@ldh.nhs.uk

Contact for any complaints

If you wish to make a formal complaint concerning this project, please contact: -

Ms Shahnaz Akbar

Consultant Obstetrician and Gynaecologist

Tel: 01582 491166 Email: shahnaz.akbar@ldh.nhs.uk

Dr Clare Morris

Lead for MA in Medical Education and Project Supervisor

University of Bedfordshire

Email: clare.morris@beds.ac.uk

Appendix 2 – Consent Form for Participants

"_Overcoming barriers to learning for junior doctors in the delivery suite: a case study._'

I have read the Information Sheet concerning this project and understand what it is about and its implications. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I agree that:- (*Please circle each point as appropriate*)

1. My participation in the project is entirely voluntary;   Y/N

2. I am free to withdraw my data from the project at any time without any disadvantage;   Y/N

3. All original data will be retained in secure storage until the project is completed in October 2013 and then deleted;   Y/N

4. Anonymised electronic copies of all data will be retained by the sponsor in secure storage for research governance purposes;   Y/N

5. During the lifetime of the project, a copy of original recordings will be available to myself for viewing within the Luton and Dunstable Hospital NHS Trust premises;   Y/N

6. Short anonymised transcribed extracts from the interview/sessions may be published in academic journals (delete as appropriate);   Y/N

7. Short anonymised transcribed extracts/audio-only clips from the interview/sessions may be used in associated research presentations (delete as appropriate);   Y/N

8. Short anonymised transcribed extracts/audio-only clips from the feedback/commentary session may be used for educational/staff development purposes within the Luton and Dunstable Hospital Trust (delete as appropriate);   Y/N

I agree to take part in this project.

Participant name................................……Signature...............................…Date………………..

Researcher name.............................…… Signature.............................……Date………………..

Appendix 3 – Intervention Timeline

Medical Education Development Project – Proposed/Used Timeline

Date/Week	LCWR	TOTW	Med Ed Teaching	Induction
03/06/13	LCWR TRIAL			
10/06/13	LCWR TRIAL		Med Ed Teaching	
17/06/13	LCWR TRIAL			
24/06/13	LCWR TRIAL		Med Ed Teaching	
01/07/13	LCWR TRIAL	TOTW Trial		
15/07/13	LCWR TRIAL	TOTW Trial	Med Ed Teaching	
22/07/13	LCWR TRIAL	TOTW Trial		
29/07/13	LCWR TRIAL	TOTW Trial	Med Ed Teaching	
05/08/13	LCWR TRIAL	TOTW Trial		Induction
12/08/13	LCWR TRIAL	TOTW Trial	Med Ed Teaching	Induction
FACULTY	**REVIEW**	**FOR**	**NEW**	**ROTATION**

Timeline Key:

LCWR – Learner Centred Ward Rounds (Miss Das)

TOTW – "Theme of the week" curriculum intervention (Ms Akbar)

Med Ed Teaching – Medical Education topic in handover teaching, 1 day (Miss Das)

Induction – Induction programme for new doctors starting in August 2013