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***Intimate examinations – Facilitating a respectful and authentic approach to learning that creates confidence and competence amongst diverse medical students.***

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**CONTEXT**

Teaching genital, inguinal, rectal and breast examinations is of particular importance in Australian undergraduate medical curricula. Confidence and competency in these examination techniques are vital skills to have as a practising doctor. However, there are well-recognised difficulties<sup>1,2</sup> with intimate examinations due to the sensitive nature of the examination. Student anxiety and stress are additional elements to be considered when developing a program teaching examination of the breast, genitalia, and rectal areas. Intimate examinations must be approached with greater sensitivity than examinations of other body areas, and much greater consideration given to communication skills and the doctor-patient relationship. Our innovative Male Teaching Associate [MTA] and female Clinical Teaching Associate [CTA] programs provide students with unique learning opportunities in men and women's health. Both programs allow students to practice clinical examinations on real people under the supervision and guidance of an experienced clinician, after receiving instructions on the correct technique through lectures and demonstrations on mannequins.

Currently intimate examinations are taught in the 4<sup>th</sup> year of the six year James Cook University (JCU) medical program across two sites [Townsville and Cairns] and in the Physician Assistant program. Total student numbers are approximately 170 with 120 in Townsville and 50 in Cairns in each year of the course, while the Physician Assistant program has 11 students in each cohort. Of these students approximately 18% are from overseas, with the majority from Malaysia, Canada and Egypt. JCU medical students come from a diverse cultural background with 30% of the students belonging to Islamic, Hindu or Buddhist faiths. This citation showcases our innovative team based approach to teach the complex and important skills of intimate examination. Our team involves clinical tutors, administrators and an evaluation officer. Students are taught these skills by nine clinical tutors. Our approach engages simulated patients, referred to as Male Teaching Associates [MTA] and Female Clinical Teaching Associates [CTA] who have been recruited and trained by us. These trained CTAs and MTAs use their bodies to teach intimate examination skills to the 4<sup>th</sup> year students under the supervision of the medical educators. The CTA program has been implemented at JCU medical school since 2003 (now in its 12<sup>th</sup> year), while the MTA program commenced in 2010. The numbers of medical educators and Teaching Associates has increased steadily each year in keeping with increasing student numbers.

Historically, intimate examination skills were often taught in the operating theatres using patients who were anaesthetized, and often without their consent. In more recent times, real male and female patients in hospitals and clinical settings are asked for their consent to participate in the teaching of intimate examination skills to medical students, but this still presents practical and ethical difficulties. The literature confirms that patients are often resentful, and obtaining their informed consent for student examination remains challenging<sup>1</sup>. In addition, patients may have unvoiced worries and concerns, and the examination can leave them feeling very vulnerable and exposed. Real patients have pain, concerns and expectations regarding their examination and treatment. Teaching Associates role play a real patient with symptoms. Students also may be embarrassed or anxious because of lack of knowledge, previous experiences, or their cultural background. Specifically these programs are designed to provide students with opportunities to examine simulated patients who are trained to minimise embarrassment and provide a safe supportive environment conducive to learning.

Benchmarked to other medical schools, our approach is clearly innovative. A survey conducted by Hunter et al.<sup>2</sup> in 2014 found the use of real patients and mannequins to be the most commonly used method for teaching both female and male intimate examinations in participating Australian medical schools. Ninety percent of Australian medical schools use real patients in hospitals or clinical settings, and mannequins to teach breast and pelvic examinations, although only 67% of medical schools also use Teaching Associates for pelvic examination. Forty five percent of surveyed Australian medical schools used Teaching Associates for breast examination. However, only 10% of Australian medical schools used male Teaching Associates to teach male genital examinations.<sup>2</sup> National and international medical schools report that the predominant mode of teaching these examinations is still via mannequins. However research evidence indicates that the teaching associate program provides the best opportunity to reduce anxiety and embarrassment in students.<sup>2</sup>

Our innovative and research-led approach has specifically used Teaching Associates to enhance student learning and confidence. Our Male Teaching Associate program, sustained since 2010 represents one of the earliest medical schools in Australia to engage male Teaching Associates. Our JCU medical students obtain feedback from real people in these examination techniques rather than learning these skills in a stressful and confronting clinical environment and the innovative and sustained approach has significant impact on student learning.

### SELECTION CRITERIA 1: APPROACHES TO THE SUPPORT OF LEARNING AND TEACHING THAT INFLUENCE, MOTIVATE AND INSPIRE STUDENTS TO LEARN

#### Addressing student anxiety and skills

Anxiety, stress, and embarrassment may hinder a student's ability to learn intimate examination skills.<sup>1,3</sup> To support these concerns a number of critical elements are embedded in CTA and MTA workshops. Approachable, friendly and engaging Teaching Associates are recruited, and trained in physiology, anatomy and communications skills by the teaching staff. The CTA and MTA sessions take place in the simulated ward at JCU, ensuring that it is a non-threatening and safe environment for students and Teaching Associates and this helps to reduce anxiety and stress. Initially, the students only observe a demonstration of an examination. They then examine a Teaching Associate utilising the techniques they have been taught and practice the communication skills. Students work in pairs and this helps build student confidence and reduce anxiety.<sup>4-8</sup> The students experience a highly structured introduction to intimate examinations through a clear 5 step process. This process is outlined in Table 1 below.

**Table 1 Stages of Learning**

Stage of learning	Overview of activities/content
<b>Tutorial</b>	Relevant anatomy, physiology, pathology and communication skills
<b>Demonstration and simulation</b>	Tutor demonstration of correct technique and communication skills. Demonstration videos. Simulation of examination on anatomy models.
<b>Pre-examination work</b>	Questions completed by the students prior to examination session.
<b>Intimate examination</b>	Examination of Teaching Associate
<b>Feedback</b>	Clinical Tutor and Teaching Associate feedback to student

The impact of this structured and supportive process is noted in the following student comments collected through formal evaluations.

*The very small group structure was ideal, as the tutors showed complete attention to our performance. Using professionally trained patients made the feedback much more useful* (Student, JCU Medical school evaluation, 2012).

*Staff are very supportive and encouraging* (Student, JCU Medical school evaluation, 2012).

*Enjoyed the communication skills training. I feel a lot more confident* (Student, JCU Medical school evaluation, 2012).

*This program was amazing! The tutors were incredibly helpful and friendly and put us all at ease. It was very educational and definitely made me feel confident to perform breast and pelvic exams* (Student, JCU Medical school evaluation, 2012).

*Best clinical skills session!* (Student, JCU Medical school evaluation, 2012).

The students are aware they will be consulting and examining a Teaching Associate and this is a particularly strong incentive to come prepared. Without the CTA/MTA experience, many students would first perform this type of clinical examination in a ward setting on real patients, without the advantages of being in a supportive, learning environment. Alternatively they would learn these examination techniques on mannequins with no feedback or element of authenticity. Practising clinical examinations on healthy people may also assist students with recognition of pathological changes in future patients, after being exposed to a point of reference for organ and tissue normality. In addition, students are required to demonstrate appropriate communication skills and professionalism during practice consultations, and successful demonstration of these vital skills is not only required but also expected by the supervising clinicians. Demonstrating competency in these examinations is essential as it is a clinical assessment in Year

4. Medical students are consistently appreciative of the feedback provided to them by the Teaching Associates, whom receive special training to provide students with advice on their examination technique, professionalism and communication skills.

#### **Developing the skills of Teaching Associates**

Our work in developing the skills of the Teaching Associates in the program ensures that students are engaged in a highly authentic experience while simultaneously improving the students' confidence, professionalism and patient-centred communication skills. The clinical tutors who train the Teaching Associates and teach the students **are doctors** recruited from general practice and surgical specialties providing clinically relevant demonstration of examination techniques, communication skills and immediate feedback to the students. Communication skills emphasising body language, non-verbal communication, the use of appropriate terminology, using appropriate words and language, and active listening are practised with the Teaching Associates, with emphasis placed on choosing positive words while communicating with the patient during the consultation. The final critical element is feedback. The Teaching Associates provide immediate, interactive and constructive feedback on student performance.

Training of Teaching Associates is conducted before commencement in the program, and includes observation at sessions and formal teaching tutorials. Teaching Associates are also required to attend a training day at the start of each year to update their knowledge, examination, communication and feedback skills. These training sessions teach the associates anatomy, physiology, pathology, and communication skills/techniques for giving effective feedback.

The Teaching Associates comment on their positive experience working with the students, as indicated in the feedback below, collected as part of a formal qualitative research project investigating the motivations of the Teaching Associates.

*I can tell you that if I went along to a clinic or hospital and saw him, I would say 'Please, sir, can I have [student]?' I was so impressed with him today – all of the students – they're just eager to learn, respectful, as professional as can be, and you know they've taken on board our program. I'd go back and see any of them [as my doctor] (CTA, 2014).*

*I think the students' communication skills are really good – they're just so lovely, respectful and courteous (CTA, 2014).*

*One student memorably told me - It is great to be relaxed about this examination and to be able to ask a patient questions. How could I do this with a real patient? You could tell the session exceeded her expectations (MTA 2014).*

#### **INFLUENCE ON STUDENT LEARNING, ENGAGEMENT AND OVERALL STUDENT EXPERIENCE**

Students report that the supportive learning environment and constructive feedback provided during the innovative sessions enhances their learning.

*The practical demonstrations were great. The CTAs and tutors were very knowledgeable, helpful, encouraging and supportive (Student, JCU Medical school evaluation, 2011).*

*Good way to learn how to do these examinations – with feedback – made learning easier as I knew exactly what I was doing right and doing wrong (Student, JCU Medical school evaluation, 2011).*

The JCU Medical School has conducted evaluations of the CTA and MTA programs since the programs commenced. These evaluations clearly demonstrate that CTA and MTA programs increase student confidence. For the CTA program, 341 medical students were surveyed between 2011 and 2013, with over 95% each year reporting they 'agreed' or 'strongly agreed' that they felt confident in performing a basic breast examination and basic pelvic examination after the CTA session. Similar results are apparent for the MTA sessions (2010 and 2013 results), in which >70% of students agreed they had sufficient confidence to be able to examine the external male genitalia, inguinal and rectal areas of a real patient.

In 2010, two comparative studies were also conducted pre-MTA program and post-MTA program for the Year 4 students, and between the 2010 Year 4 students (post-MTA session) and the 2010 Year 5 students (who did not learn intimate exams with the Teaching Associates, but learnt via class-based tutorials). The pre-post study found statistically significant improvements in knowledge, confidence and ability to perform all male intimate exams ( $p < 0.001$ ) in the Year 4 students. The second study, comparing the 2010 Year 5 students with the post-MTA session Year 4 students, found that Year 4 students reported

significantly higher knowledge, ability and confidence in all male intimate examination ( $p < 0.001$ ). This study has similar findings to Lawrentschuk and Bolton's (2004) study<sup>9</sup>, that revealed that while >80% of Australian medical graduates at the University of Melbourne had been taught to perform a digital rectal exam (DRE) using plastic models and had usually performed two DREs on clinical placements, only 50% of graduates felt confident enough to report rectal exam findings.<sup>9</sup>

These skills are vital to learn as a practising doctor. In 2012, employer views on JCU graduate outcomes were evaluated through the pilot of an *Evaluation of the performance of JCU medical graduates as Interns* survey. The survey sought information on how JCU graduates are regarded by their clinical supervisors across a range of indicators, including: work-readiness, teamwork, communication, procedural skills, clinical knowledge, decision-making and a commitment to health equity. Twenty-two medical supervisors of JCU graduates working as interns (predominantly specialist registrars) in Queensland tertiary teaching hospitals in Townsville, Cairns and Brisbane took part in the pilot. The preliminary results of the study found that supervisors rated JCU graduates as demonstrating superior performance as interns compared to all other Australian or New Zealand trained doctors who had worked as interns in that hospital.<sup>10</sup>

### RECOGNITION OF INNOVATIVE NATURE OF PROGRAM

Recognition and appreciation is frequently received from students, male and female Teaching Associates, medical school colleagues, and industry colleagues around the educational value of CTA and MTA sessions.

*The Teaching Associates' direct contemporaneous feedback to the students during the small group teaching sessions is a powerful formative learning experience for the students. Students who are assessed by the Teaching Associates to have not satisfactorily attained the required competencies have the opportunity to attend further sessions so that they can improve their examination skills. This program ensures that our students progress into their senior clinical student years with increased confidence in their ability to perform intimate examinations in real clinical settings on real patients* (Associate Professor PA Teague Director Clinical Studies, JCU).

*Have just recently witnessed a fifth year student who was excellent in his external genitalia examination. Excellent respect and sensitivity with the patient. He was very thorough and methodical and a credit to his teaching* (Dr Lun, Consultant Urologist, Townsville Hospital 2014).

Academic staff from the program have also presented nationally at the 2011 General Practice Conference - GP11, on the benefits that the MTA program makes to medical student learning and confidence in their examination techniques<sup>11</sup>. The dedication and commitment of the Teaching Associates is acknowledged and documented within these presentations. The program has also been recognised at JCU with a *Citation for Outstanding Contributions to Student Learning* in 2014. The Intimate Teaching Team has demonstrated best practice in implementing the teaching associate program with studies confirming these programs enhance confidence, procedural and communication skills and reduce students' anxiety.<sup>2</sup> The CTA and MTA programs represent sector leading initiatives, sustained over time that have clearly impacted positively on the learning of diverse students.

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