

https://dspace.org/

# Effects of curriculum change on medical graduates' preparedness for internship

**Smuts, Kathleen Bridget**

**2012-04-10**
http://hdl.handle.net/10539/11452

Downloaded from a DSpace repository. https://dspace.org/

## APPENDICES

**APPENDIX A** **Phase 1:**

A1: Spreadsheet of sources and final categories for "The Model of the Competent South African Intern"

A2: Interview schedules and information sheets

**APPENDIX B** **Phase 2:**

B1 Information and consent form for interns and supervisors

B2 Intern Questionnaire and information sheet (2007 update)
Intern Interview Schedule

B3 Supervisor Questionnaire and information sheet (2007 update)
Supervisor Interview Schedule

B4 Colleague Questionnaire and open ended comment schedule

B5 Patient Interview Schedule

**APPENDIX C**

C1: Full table of interns' questionnaire scores

C2: Full table of supervisors' questionnaire scores

C3: Full table of colleagues' questionnaire scores

C4: Full table of patients' allocated interview scores

**APPENDIX A1:** Sources used in the development of the "Model of a Competent South African Intern" after the coarse sieve process.

| Category and Performance Criteria | Wits Attributes/SAQA | GEMP I&II Theme Outcomes | GEMP III Eval form+fac guidelines | HPCSA Logbook/Ass form | IS001 Supervisor Interviews | IS002 | IS003 | IS004 | IS005 | IS006 | IS007 | IS008 | IS009 | IS010 | IS011 | IS012 | IX001 Interviews with Ex-Interns | IX002 | IX003 | IX004 | IX005 | 1. Hill/Rolfe 1998 Newcastle | 2 Hayes & Feather 2004 | 3. Evans, Wood & Roberts 2004 | 4. Hannon 2000 | 5. Akabayashi et al 2004 | 6. Holmboe and Hawkins 1998 | 7. van Staden et al 2005 | 8. Mamede and Schmidt 2004 | 9. Schön 1983 | 10/11. Pearson *et al*/ 98/Rolfe et al' | 12. Dean et al 2003 | 13. Jaques *et al* 1998 (rural) | 14. Firth-Cozens 1987 | 15. Al-Haddad&Jayawickramarajah | 16. Dally, Ewan and Pitney 1984 | 17. Schmidt & v d Molen 2001 | 18. Jotkowitz, A.B. 2004 | 19 Hurwits & Vass 2004 | 20 Dubb 1986 | 21 Rosenbaum et al 2004 | 22. Coulter 2002 (Pts views) | 23. *Barnsley et al 2004 | OCCURENCES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Fundamental (Theoretical) knowledge** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **56** |
| natural and basic sciences including normal structure and function | y | y | | y | | | | | | y | y | | | y | y | | | y | | | | | | | | y | | | | y | y | | | | | y | | | | | | | 12 |
| disease processes/pathology and pathophysiology/ infection control related to patient problems | y | y | | y | | | | | | y | y | | | y | y | y | | y | y | | | y | | | y | | y | | | y | y | | | y | | y | y | | | | | 18 |
| scientific basis of therapy/application of basic medical science to patient problems | | y | | | | | | | | y | y | | | y | y | | | y | | | | y | | | | | y | | | y | y | | | y | | y | y | | | | | 13 |
| principles of therapeutics, pharmacokinetics, pharmacodynamics | | y | | y | | y | y | | | y | y | | | y | y | | | y | | | | | | | y | | | | | | | | | y | | y | | y | | | | 13 |
| **Medical Problem solving/Clinical Judgement/Clinical competence** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **115** |
| collecting data - history taking, consult, reason for encounter, questionning start broad & focus | y | y | y | y | | | y | | y | | y | y | | y | | y | | y | y | | y | | y | | y | | y | | | y | y | | | y | | | | y | | | 21 |
| perform focused physical examination, (elicit & interpret signs) | y | y | y | | | | y | | y | | y | y | | y | | y | | y | | | y | | y | | y | | y | | | y | y | | | y | | y | y | | | | 20 |
| ability in problem solving, define problem, develop & test hypotheses, deliberate thinking/diff diag | y | | y | y | | | y | | y | | y | y | | y | | y | | y | | | y | | | | | y | | y | y | | | | y | y | y | | y | | | | 18 |
| requests/performs appropriate diagnostic tests, minimises needless investig/cost conscious | | | | y | | | | | y | | y | y | | y | | y | | y | y | | y | | | y | | | | | y | | | | y | y | | | y | | | | 14 |
| documenting - recording at an acceptable standard (eg patient notes), referral letters etc | y | | | y | | | | | y | | | | | y | | | | y | y | | | | | | | | y | | | | | | | y | y | | | | | | | 9 |
| analyse/interpret/critically reflect on information (history, examination, diagnostic tests, pt notes) | y | y | y | y | | | | | y | y | y | | | y | | y | | y | | | | | | | y | | y | | | y | y | y | | y | | | | y | | | | 17 |
| make appropriate decisions regarding initial mgmt / initiate treatment of common conditions | y | | y | y | | | | | y | | y | | | | | y | y | y | | | y | | | | y | | | | y | y | | | y | y | y | | y | | | | 16 |
| **Holistic patient management** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **91** |
| safe achieved level of basic tech skills (drip/suturing/venepuncture/BP/catheterisation/CPR/LP/ECG) | y | | | y | | y | y | y | y | y | y | y | y | y | y | y | | y | y | y | | y | y | | | y | | | | y | y | y | y | y | y | y | y | | | | 30 |
| assist with major surgical procedures/perform lesser ones under supervision/pre&post op care/anaes | | | | y | | | y | y | y | y | | y | y | y | | | | y | | y | | | | | | | | | | | | y | | | y | | | | | | 12 |
| awareness of clinical priorities, triage, managing medical and surgical emergencies | | | | y | y | | y | y | y | | | y | | y | | | | y | y | y | | | | | y | | | y | | | | | y | | | | | | | | | 13 |
| formulate orderly pt plans - investig, observ, therapy, medication, counseling, referral, follow-up | y | | y | | | | | | y | | y | y | | | | | | | y | y | | y | | | | | | | | y | y | | | | | | | | | | 10 |
| management of chronic problems/follow up own patients in outpatients/continuation of care | | | y | | | | | | y | y | | | | y | | | | | | | | | | | | | | | | | | | | | | | | | y | | | 6 |
| biopsychosocial approach/involve pt/family in planning/agree priorities & pt preferences | y | y | y | y | | | | | | | | | y | | y | y | | | | | | y | | | y | | | | y | | | | | y | y | | | y | | y | | 14 |
| identify risk factors, facilitate behaviour change for health promotion & actions to prevent disease | y | y | | | | | | | | | | | | | | | | | | | | y | | | | | | | | | y | | | y | | | | y | | | | 6 |
| **Community health** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **5** |
| understand different levels of health care in SA/delivery constraints/hospitalised & ambulatory pts | y | y | y | y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | y | | | | | | | | | | 5 |
| **Professional Attitudes and Values/Ethics** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **55** |
| incorporate ethical issues in practice/theories/principles/ethical decision making | y | y | y | y | | | | | | | | y | | y | | | | y | | | | | | | y | y | | y | | | | y | | | y | y | | y | | | | 15 |
| respect for dignity of patients & colleagues encompassing all diversity/language/culture/opportunity | y | y | | y | | | | | | | | y | | y | y | | | | | y | | | | | | | y | y | | y | | | | | | | | | | y | | 12 |
| Pt Rights, pt advocacy/confidentiality/duty to deliver care/prevent harm/medicolegal risks/laws | y | y | | y | | | | | | y | | y | | y | y | y | | y | y | | y | | | | y | y | | y | | y | | | y | | | | y | y | | | 19 |
| prioritise interests of patient and family above one's own | | y | | | | | y | | | y | | y | | y | | y | | y | y | | | | | | | | | | | | | | | | | | | | y | | | 9 |
| **Effective Communication skills** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **56** |
| interpersonal skills/taking time to listen/allowing pt to elaborate/respond to pts fears/body language | | y | y | | | | | | | | | | y | | | y | | | | | | | | | y | | y | y | | | y | y | | | | y | | y | | y | | | 12 |
| appropriate style, structure, language with colleagues/patients/family members | y | | y | | | | | | | | | | | y | | y | | | y | | | y | | | y | | y | | | | y | y | | | y | y | | | | | | 14 |
| assist pt solve problems/deal with difficult questions/sensitive issues/bad news/counseling | | y | | | | | | | | | | | | y | | y | | | | | | y | y | | y | | | y | | | y | | | y | | y | | | y | | | 11 |
| supporting and counseling of dying patient and support of relatives | | | | y | | y | | | | | | | | | | y | | | y | | | | | | y | | | | | | | | | | | | y | | | | | 6 |
| clear presentation of cases/seminars | | | | y | | | y | | y | y | | y | y | y | | y | | y | y | y | | | | | | | | | | | | | | | | | y | | y | | | | 13 |
| **Working with others in a team** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **68** |
| good prof relationships with health team members/appreciate scope/nature of skills/contributions | y | | y | y | y | | | | y | y | | y | y | y | y | y | | | | y | y | y | y | | y | | y | | | y | y | y | y | y | y | | | y | y | | 25 |
| takes appropriate share of workload, team assignments, admin/managerial work, paperwork | y | | y | | | y | | y | y | | y | | | y | | y | | y | | | y | | | | | | | | | | | | | | y | y | | | | | 12 |
| able to give and accept constructive feedback, learns from mistakes, helps colleagues learn | y | | y | | y | y | | | | | | | | y | | y | | | | | | | | | y | | y | | y | | y | | | y | | y | | | | | 12 |
| willingness to work effectively in a team/team spirit//learn from/share ideas, pt notes with others | y | y | | y | | y | | | y | y | | y | y | y | y | | | | y | y | y | y | y | | y | | | | | | | | | y | | y | | | | | 19 |
| **Self directed learning** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **87** |
| self direction/motivation/enquiry/willing to learn/utilize learning opportunities/update knowledge/read | y | | y | y | y | y | y | y | y | y | | y | y | y | y | y | | y | | y | y | y | y | | y | | | | | y | y | y | | y | y | y | y | | | | 27 |
| self evaluate, recognise limitations(knowledge/skills), willing to seek help/learn from mistakes | y | y | y | y | | y | | y | | y | y | y | y | y | | y | | y | y | y | | y | | | y | | | | y | | y | y | | | y | | y | | y | | | 22 |
| attendance at ward rounds and formal teaching sessions | | | y | y | y | y | y | | y | y | y | y | y | y | y | y | | y | | y | | y | | | | | | | | | | | | | | y | | | | | | 17 |
| use of modern library (including e-books/journals), reading medical literature, online resources | y | | | y | | | | | | y | | y | | y | | | | | y | y | | | | | | | | | | | | | | | y | y | y | y | | | | 11 |
| research/scientific knowledge/ EBM/critical reflection/make sense of complexity | y | y | y | | | | | | | y | | | | y | | | | | | y | | | | | | | | y | y | | | | | | | | | y | y | | | | 10 |
| **Confidence and personal attributes (intangible personal resources)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **108** |
| sense of personal responsibility (and accountability) for patients in his/her care | y | | | y | y | y | | y | y | y | | y | y | y | y | y | | y | y | y | y | | | | | | | | | | | | y | | | | | y | | y | | | 19 |
| stamina & coping skills/ long hours/exhaustion/uncertainty/changing environment/find feet quickly | | | | y | y | y | y | y | y | y | | y | | y | y | | y | y | y | y | y | y | y | | y | | | | | y | | y | y | y | | | y | y | | | 26 |
| personal time management/maintaing a balanced life - personal and work | | | y | | | | | | y | y | | y | | | | y | y | y | | y | | | | | y | | | | | | y | | y | | | | | | | | 13 |
| caring and compassionate nature, empathy, humaneness | | | | y | y | | | | | y | | | y | y | y | y | | y | | | y | | | | y | | y | | | | | | | y | | | | | y | | y | | 14 |
| dependable, thorough, punctual, there when expected, hardworking, fulfills obligations, initiative | | y | | y | y | y | y | y | y | y | y | y | y | y | y | y | | y | y | y | y | | y | | | | y | | | y | y | | | y | y | y | | | | | | 25 |
| willing to go the extra mile/anticipation & enjoyment of clinical work/enthusiastic | | | | | y | y | | | y | y | | | | | | y | | y | | | Y | | y | | | | | | | y | | | | | y | y | | | | | | 11 |

**APPENDIX A2**

SEMI-STRUCTURED INTERVIEWS

INFORMATION FOR ALL INTERVIEWEES:

Thank you for agreeing to see me. My name is Bridget Smuts and I am the Education Development Officer in the Faculty of Health Sciences at Wits University. You may be wondering what this meeting is about, so let me explain. I am working on a research project to find out how well our medical graduates perform during their internship training and how well their undergraduate education has prepared them for this.

I'd like to assure you that I am not here to judge intern facilities, nor to check on the supervision given to interns. What I really need is to gain a better understanding of what happens to our medical students once they leave us and how this knowledge can help us to improve the undergraduate curriculum. More specifically I would like to know:

- what interns do in your facility and what responsibilities they take
- what, in your opinion, are the qualities and competencies that make a good intern
- which aspects of an intern's undergraduate medical education most affect the quality of their performance.

Information that you give me will be used to develop a questionnaire which will be administered to a sample of Wits interns each year from 2005 to 2008. The undergraduate curriculum at Wits is currently undergoing extensive change and we need to monitor the outcomes closely. This information is for my research only and will not be passed on to the administration of your hospital or facility.

The interview should take 1-1½ hours. You may choose not to answer particular question and you are free to withdraw from the interview at any stage with no negative consequences to yourself or your unit. I will make notes as we talk and will try, where possible, to check with you that my understanding of your comments is correct. You are welcome to review my notes for accuracy before I leave.

Any information that you give me will be treated in the STRICTEST confidence. You will remain anonymous and your comments will be coded so that they cannot be traced back to you personally. I will use only grouped responses in any reports or publications that I write and any quotes will be coded and edited to eliminate identifying features.

If you agree to be interviewed please would you give your consent by signing below.

CONSENT:
I agree to be interviewed on the understanding that my responses will remain anonymous and will not be able to be traced back to me personally.
I also understand that I may decline to answer particular questions and that I am free to withdraw from the interview at any stage.

Signed: …… Date: ……

THANK YOU

INTERVIEW QUESTIONS FOR **INTERN SUPERVISORS**

INTERVIEWEE CODE: IS ……..

| QUESTION | RESPONSE |
|---|---|
| Q1 I'd like to start by finding out a bit about you and what it's like to supervise interns. Your name, length of time as an intern supervisor, did you volunteer for this role, do you enjoy it, does it take up a lot of your time, do you get recognition for this? | 1.1 Sex:<br><br>1.2 Position in the hospital:<br><br>1.3 Years of experience as a supervisor:<br><br>1.4 Volunteered for role of supervisor?<br><br>1.5 Time taken up?<br><br>.<br><br>1.6 Recognition for work done? |
| Q2 Please tell me about this facility – what types of patients and conditions are seen, what are the workloads like, how is the day organised? | 2.1 Types of patients/conditions seen<br><br>2.2 Workloads and organisation of interns' day |
| Q3 Please tell me about the interns that you have at present. How long have they been in your department, do you get to know them well, do you know where they did their undergraduate training, how long did they take them to settle in, what sort of orientation do they have to the unit? | 3.1 No of interns:<br><br>3.2 Length of time in dept:<br><br>3.3 U/g training schools?<br><br>3.4 Time taken settling in<br><br>3.5 Orientation? |
| Q4 What are interns expected to do in the unit, who looks after them mostly, do they have a mentor, do they have any formal tutorials, teaching rounds, etc | 4.1 Intern duties / tasks?<br><br>4.2 Who usually looks after them?<br><br>4.3 Do they have a mentor? |

| | |
|---|---|
| | 4.4 Formal teaching round/tutorials/lectures? |
| Q5 How do interns get to practice and perfect the clinical procedures expected of them (clerking, venepuncture, putting up drips, inserting drains, LPs, etc.)? | 5.1 Practice of procedures? |
| Q6 I'm sure that you have supervised interns that you have considered really good and some who are not so good. What differentiates them? What are you looking for? Is the HPCSA evaluation form taken very seriously? | 6.1 Qualities of a good intern?<br><br>6.2 Use of HPCSA eval form? |
| Q7 Can you see differences between interns from different medical schools? Which characteristics show this up most? | 7.1 Interns from different medical schools? |
| Q8 Can you describe a situation where an intern really excelled in a patient situation? What impressed you the most? | |
| Q9 Can you describe a situation where an intern performed badly in a patient situation? Where did things go wrong and why? | |
| Q10 What do you think influences the ability of an intern to perform well? | |

**ADDITIONAL NOTES**:

## QUESTIONS FOR: COMMUNITY SERVICE DOCTORS

INTERVIEWEE CODE: CS ……..

I will start the interview by establishing rapport, showing interest in interviewee and his/her experience of the recently completed internship.

Q1 I'd like to start by finding out a bit about you and what it was like being and intern.

Your name?

where did you do your internship?

did you choose the domains (fields) to which you were allocated?

was it a good year in general?

how did it affect the interns' home and social life?

how do you feel now that it's over?

Q2 Please tell me about the facilities that you worked in – how long did you stay in each department?

what types of patients and conditions did you see?

what were the workloads like?

how was your day organised?

did you settle in quickly?

what orientation did you receive?

These questions will be followed by my asking about the Intern's duties

Q3
What were interns expected to do in the units in which you worked?

who looked after you mostly?

did you have a mentor?

did you have formal tutorials, teaching rounds, etc?

Did you have to do a lot of reading or could you get by without?

Q4
Which procedures did you do, (eg. clerking, venepuncture, drips, inserting drains, LPs, etc)?

How did you get to practice and perfect these?

How well did your undergrad medical education prepare you for this?

Q5 Comparing the interns with whom you worked what would you say differentiated the excellent interns from the mediocre or not so good ones?

5.1 What makes a good intern?

5.2 What makes a bad intern?

.

Q6
Could you see differences in the interns from different medical schools?

What were these differences (characteristics)?

Q7 Can you describe a situation where you (or another intern) really excelled in a patient situation? What satisfied (or impressed) you the most?

Q8 Can you describe a situation with a patient where you (or another intern) wished that you (they) could have the chance to do it again differently? Where did things go wrong and why?

Q9 Thinking back to your undergraduate education, which aspects really helped you when it came to real clinical practice during internship?

Q10 Where do you think your undergrad medical education failed you or had gaps?

THANK YOU FOR SHARING YOUR EXPERIENCES AND OPINIONS WITH ME

## APPENDIX B

The following questionnaires and interview schedules were used during Phase 2 of the study.

B1 Information and consent form for interns and supervisors
B2 Intern Questionnaire and information sheet (2007 update)
Intern Interview Schedule
B3 Supervisor Questionnaire and information sheet (2007 update)
Supervisor Interview Schedule
B4 Colleague Questionnaire and open ended comment schedule
B5 Patient Interview Schedule

**APPENDIX B1**

## 2007 INTERN AND SUPERVISOR INFORMATION SHEET AND CONSENT

### INFORMATION

Thank you for agreeing to see me. My name is Bridget Smuts and I am the Education Development Officer in the Faculty of Health Sciences at Wits University.

Background: Wits introduced a new problem based medical curriculum in 2003. The differences between this and the traditional MBBCh degree are mainly in the methods of teaching and the integrated approach to the content. It also allows graduates with a suitable first degree to enter the third year of medicine. They join the mainstream students for the final four years of the degree. It's important that we evaluate the outcomes of this new curriculum in a systematic and rigorous manner. We thought that the best way to do this is to describe the qualities expected of a competent South African intern and to ask the interns themselves, their clinical supervisors, colleagues and patients how well they think that the Wits undergraduate education has prepared its graduates in these particular areas.

How you were chosen : I obtained from the Department of Health a list of all Wits graduates who started their internship in January 2006 and drew a randomised sample of interns by gender and hospital level (tertiary, regional and district). This was the last group of graduates from the traditional medical curriculum. In 2007 a matched sample was drawn of interns from the GEMP curriculum. Your name was drawn in this sample and the supervisor of your current rotation was automatically selected to be invited to participate with you. Your joint participation would be greatly valued but is entirely voluntary and if either of you choose not to participate there will be no negative consequences.

- I'd like to speak openly to you and your supervisor together so that there are no misunderstandings and that each part of the study is understood and accepted by both of you should you decide to participate. You may look at all the documents.
- This is an evaluation of the Wits MBBCh curriculum and not the individual intern – all participants (interns, supervisors, patients and colleagues) are given a code number and no names or identifying information will be used
- I will pool the information of all the interns who participate to develop an overall view of graduates from the medical curriculum that you experienced. Your individual information will not be used for any other purpose and will not be handed to any other person or institution.
- There is no hidden agenda and you are free to ask any questions which I will answer honestly. I'll willingly discussing any misgivings that you might have about the process – this will also help me to ensure that the study does not compromise anyone in a way that I may not have thought about.

Process: Prof Kate Hammond will be assisting me. If you agree to participate we will give you each a questionnaire:

1 Intern: Self report on how prepared and confident you felt about your internship – please fill this in and return it to me when completed

2 Supervisor: A similar questionnaire about the intern's observed performance – please fill this in and return it to me when completed.

3 We will meet each of you separately once we have seen your responses to discuss how the areas that you rated "1" or "5" (not prepared or fully prepared) may be related to the MBBCh curriculum

4 There are two further viewpoints that would be useful, namely those of patients and fellow health team workers about interpersonal skills and teamwork. We will need to interview briefly:
- a randomly selected patient, currently in the unit, whom you, the intern, have cared for. This is about interpersonal skills
- a health team colleague, available in the unit, about working as a team member

In every case we will obtain fully informed and signed consent from each person involved before proceeding. Participants may decline to participate or withdraw at any stage. There should be no disadvantage to interns who participate. We are the only people who will see the responses and we have no authority over your internship training.

**CONSENT**

- I agree to participate in the study on the understanding that my responses will be coded and will not be able to be traced back to me personally
- I understand that I may decline to answer particular questions or participate in individual parts of the study and that I am free to withdraw at any stage
- I acknowledge that I have seen all the various questionnaires and interview guides to be used in the study.

INTERN

| Research | Signature | Date |
|---|---|---|
| Part 1 Self report intern's questionnaire | | |
| Part 2 Supervisor's questionnaire | | |
| Part 3 Post questionnaire interview | | |
| Part 4 Interview with a patient | | |
| Part 5 Interview with a colleague | | |

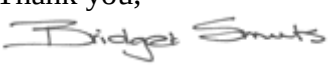
SUPERVISOR

| Research | Signature | Date |
|---|---|---|
| Part 1 Supervisor's questionnaire | | |
| Part 2 Post questionnaire interview | | |

The study will only be fully complete after four years but you are welcome to contact me about the results.

Wits Centre for Health Science Education, 7 York Road, Parktown, 2193.
Tel: (011) 717-2073, Email: Bridget.Smuts@wits.ac.za

Thank you,



Bridget Smuts

**APPENDIX B2**

**IRC :**

## Research Questionnaire for Wits Interns in 2007

## MEDICAL GRADUATES' FEELINGS OF PREPAREDNESS FOR INTERNSHIP

Dear Intern

My name is Mrs Bridget Smuts and I am Education Development Officer in the Faculty of Health Sciences at Wits. I have been asked by the Faculty to undertake a study on Wits graduates during their internship year. We know that our graduates are generally well received as interns and we want to make sure that we continue to produce good interns after the changes that were introduced in 2003 (GEMP). It would help me a lot to have your opinion about how well you feel your undergraduate education prepared you for internship when you first started in January. Your supervisor will also complete the same questionnaire but this time about your observed performance. This study is for quality assurance of the MBBCh degree. I am NOT assessing your personal progress – all information from questionnaires will be pooled to assess overall MBBCh curriculum outcomes. Prof Kate Hammond will assist me with the interviews

How your name was chosen : In 2006 a stratified sample of interns was drawn and these interns were visited to complete questionnaires and interviews. In 2007 a sample of current interns has been drawn to match as closely as possible the 2006 group regarding gender, hospital level, province, etc. Your name was drawn in the 2007 sample of Wits MBBCh graduates who started their internship in January. Your participation is voluntary and if you choose not to participate there will be no negative consequences.

How you can assist: If you are willing to assist in the research, please complete the questionnaire as frankly as possible. It should take about 30 minutes. Should you decide not to participate, please return the form in any case – just write your reason on the back page and hand it back. This will help me to validate the study. You may omit items and may withdraw at any time. It would be helpful if you would agree to a short interview following completion of the questionnaire to discuss how those items identified as "not prepared" or "fully prepared" might relate to your MBBCH curriculum.

Confidentiality : Please do not write your name on this questionnaire. Naturally, I know who you are because I am meeting you personally, but in order to protect your identity and maintain confidentiality I have allocated you a random "Intern Research Code" (see top of page). The link between this IR code and your Wits student number is known only to the researchers and is kept off campus. Your responses will only be identifiable by this code in the database. I promise to treat any information that you give me in the STRICTEST CONFIDENCE. Any written reports will use only grouped data which cannot be traced back to you. You are welcome to ask for clarification of any procedures that may concern you.

How you can contact me: my phone numbers are (011) 717-2073 or cell phone 073 171 9126. You could also e-mail me at smutsb@chse.wits.ac.za .

I know how difficult it is to find time to fill in questionnaires, but your responses are important and I would really value your input. Every good wish for the remainder of your Intern Year.
Kind regards, Bridget Smuts

**Please complete the following:**

DEPT of your FIRST Rotation: ……

Length of time you completed in that rotation: …… (weeks)

**The items in the table below relate to specific areas of expected intern competence.** PLEASE TRY TO THINK BACK TO WHEN YOU STARTED YOUR INTERNSHIP and rate EACH item in terms of how <u>well you were prepared</u> to perform in this area.

Tick a box from 1-5 according to the following descriptions:

- **1= not prepared** – I do not know enough <u>or</u> I don't feel confident to do this yet, even with supervision
- **2= a little prepared** – I was rather unsure <u>or</u> I needed someone to guide me through the process
- **3= fairly well prepared** – I was fairly sure of my knowledge <u>or</u> I was willing to try with some help
- **4= well prepared** – I felt that I knew this <u>or</u> I could do this, but would have liked to have someone check me
- **5= fully prepared** – I knew this really well <u>or</u> I felt able to do this well without any assistance

| **TO WHAT EXTENT DID YOUR UNDERGRADUATE EDUCATION <u>PREPARE</u> YOU TO . . . . . . . ?** | | **Preparedness** | | | | |
|---|---|---|---|---|---|---|
| | | **-** | | | | **+** |
| | | 1 | 2 | 3 | 4 | 5 |
| 1 | remember and apply the basic sciences (chemistry, physics, anatomy, physiology, molecular medicine and haematology) to understand your patients' illness and when discussing cases | | | | | |
| 2 | know sufficient anatomical pathology, pathophysiology and microbiology to understand the disease processes you encountered | | | | | |
| 3 | know enough pharmacology (therapeutics, pharmacokinetics and pharmacodynamics) to safely prescribe routine medicines | | | | | |
| 4 | apply theory of interpersonal and communication skills to all doctor/patient and doctor/colleague relationships | | | | | |
| 5 | take good histories from patients and/or family members/minders | | | | | |
| 6 | focus your history without losing important information | | | | | |
| 7 | perform a thorough physical examination on adult patients | | | | | |
| 8 | perform a thorough physical examination on children | | | | | |
| 9 | elicit and interpret physical signs | | | | | |
| 10 | request appropriate special investigations (tests, x-rays, etc) for particular conditions | | | | | |

| TO WHAT EXTENT DID YOUR UNDERGRADUATE EDUCATION PREPARE YOU TO . . . . . ? | | Preparedness - 1 | 2 | 3 | 4 | + 5 |
|---|---|---|---|---|---|---|
| 11 | request only tests that are really necessary, in order to save on costs | | | | | |
| 12 | write good, complete patient notes which other members of the health care team can also use in planning their patient care | | | | | |
| 13 | analyse and interpret patient data from various sources so as to identify problems, develop and test hypotheses and come up with reasonable differential diagnoses | | | | | |
| 14 | make decisions regarding the initial management of patients under your care | | | | | |
| 15 | assist competently with surgery in the operating theatre | | | | | |
| 16 | perform an endotracheal intubation | | | | | |
| 17 | perform minor surgical procedures (eg. biopsy) on your own | | | | | |
| 18 | perform **basic clinical procedures** safely | | | | | |
| 19 | more specifically:<br>perform a venepuncture for taking blood samples | | | | | |
| 20 | insert a nasogastric tube | | | | | |
| 21 | put up a drip (IV cannulation) | | | | | |
| 22 | insert an indwelling urinary catheter in a male or female patient | | | | | |
| 23 | take an ECG recording | | | | | |
| 24 | initiate basic life support (CPR) | | | | | |
| 25 | take an accurate blood pressure measurement | | | | | |
| 26 | put in a central venous line | | | | | |
| 27 | perform a lumbar puncture | | | | | |
| 28 | respond effectively in an emergency | | | | | |
| 29 | prioritise the patients needing care first (triage) | | | | | |
| 30 | formulate an orderly patient care plan from admission to discharge (including investigation, observations, therapy, medications, counselling) | | | | | |
| 31 | involve the patient and his/her family in planning care | | | | | |
| 32 | manage chronic conditions and follow your patients' progress in outpatient clinics | | | | | |
| 33 | identify lifestyle risk factors and educate your patients to change their behaviour so as to promote health and prevent disease | | | | | |
| 34 | work with ambulatory patients in clinics and outpatient departments | | | | | |
| 35 | provide the best possible care for your patients within the delivery constraints of the SA health care system | | | | | |
| 36 | take into account the patients' home circumstances when planning for discharge and aftercare | | | | | |
| 37 | Incorporate knowledge of SA communities and cultures in caring for your patients | | | | | |
| 38 | incorporate ethical principles (beneficence, non-maleficence, autonomy and justice) into your patient care | | | | | |
| 39 | deal respectfully with patients and colleagues of all races, cultures, abilities and socioeconomic levels | | | | | |
| 40 | know your patients' rights and assist them to stand up for their rights | | | | | |
| 41 | know about medico-legal risks and working within the law | | | | | |
| 42 | ask appropriate questions in a manner which allows the patient time to give full answers | | | | | |

| TO WHAT EXTENT DID YOUR UNDERGRADUATE EDUCATION PREPARE YOU TO . . . . . ? | | Preparedness - 1 | 2 | 3 | 4 | + 5 |
|---|---|---|---|---|---|---|
| 43 | support or counsel a dying patient and his/her relatives | | | | | |
| 44 | adapt your communication style appropriately when talking to colleagues, or to patients and family members of diverse cultures and educational or socioeconomic backgrounds | | | | | |
| 45 | present patient cases to seniors and colleagues during ward rounds and teaching sessions | | | | | |
| 46 | develop good professional relationships with others in the health care team (nursing staff, colleagues, therapists, administrators) | | | | | |
| 47 | carry your full share of the routine work load without burdening others with things you should have done | | | | | |
| 48 | accept constructive feedback positively in order to learn from your mistakes and improve your clinical skills | | | | | |
| 49 | know the roles and skills of other health professionals so that you can enlist their help or refer patients to them where appropriate | | | | | |
| 50 | find up-to-date information to improve your knowledge about the conditions with which your patients present | | | | | |
| 51 | recognise when your knowledge is not sufficient to proceed safely | | | | | |
| 52 | ask the right person for help when you don't know something | | | | | |
| 53 | use research articles and evidence based medicine (e.g. Cochrane) searches to reflect on, or make sense of, complex patient management problems | | | | | |
| 54 | take responsibility and be accountable for your part in your patients' care | | | | | |
| 55 | cope with the long hours and demands of internship | | | | | |
| 56 | manage your time so as to maintain a balance between work demands and personal life | | | | | |
| 57 | cope with the uncertainty that doctors sometimes feel (ie. having to start management of patients' conditions without always knowing the final diagnosis) | | | | | |

Please note any points, in relation to your undergraduate (MBBCh) education, which you think may have played a positive or negative role in your level of preparedness.
Positive:
Negative:

Are any of the skills, attitudes, knowledge, approaches etc which you learnt at Wits being stifled in the current (internship) environment? If yes, please explain. Thank you!

YES NO

**IRC:**

## Interview Guide for discussion with Intern after completing the Questionnaire

*(This interview is conducted after the researcher has read the intern's responses to the questionnaire and highlighted those items which received a score of 1 or 5. These qualitative data will be used to help explain or clarify the numerical questionnaire data).*

Thank you for filling in the questionnaire. I would like us to look particularly at those items to which you responded with a 1(2) or a 5:

**1** = **not prepared** (I did not know enough or I didn't feel confident to do this, even supervised)

**5** = **fully prepared** (I knew this really well or I felt able to do this well without any assistance)

**Why did you say that you felt prepared (not prepared) in this area?**

Where in your undergraduate curriculum were these areas covered?

How were they handled?

What might have made things better in the curriculum?

If, after our discussion, you think that perhaps you misunderstood any items or responded incorrectly, we can change your answer, but I will mark these as changed and give a reason for each change.

**Items marked 1 (2)**

| Item # | Comment |
|---|---|
| …… | |
| …… | |
| …… | |
| …… | |

**Items marked 5**

| Item # | Comment |
|---|---|
| …… | |
| …… | |
| …… | |

**Any further comments?**

**APPENDIX B3**

**SRC :**

**Research Questionnaire for SUPERVISORS**

**Intern Competence of Wits Interns in 2007**

Dear Intern Supervisor

My name is Bridget Smuts and I am Education Development Officer in the Faculty of Health Sciences at Wits University. The Faculty is conducting a study to measure the internship performance of a sample of our medical graduates. In 2006 interns from the "traditional" MBBCh curriculum were included in the study, and in 2007 the sample will comprise interns from our new integrated, problem-based Graduate Entry Medical Programme (GEMP), which was introduced in 2003. The purpose of the study is for quality control and to identify differences in the graduates of the two curricula. Your assessment of the intern will not be used to monitor his/her individual progress and I am not evaluating your supervision or your unit.

How your name was chosen : I drew a stratified, random sample of the 2006 Wits MBBCh graduates from the allocation list supplied by the Department of Health. This sample included interns in different provinces and at tertiary, regional and district hospitals. In 2007 a matched sample of interns has been drawn. Your name came up as supervisor for at least one of the interns in the sample. The interns are being asked to complete a questionnaire on how well they feel that their undergraduate education prepared them for internship and I would like to compare this to your observation of their actual performance in their first rotation. I should greatly appreciate your participation but wish to emphasize this is voluntary, with no negative consequences should you decline. You may omit any items and may withdraw at any time.

The questionnaire: The items in this questionnaire address similar areas of intern competence to the student questionnaire. You are asked to rate how well you feel that this particular Wits intern performed at **the start of his/her internship** (in other words, how prepared he/she seemed to be for internship – we assume that they will improve over time) **compared to other interns that you have supervised over the last FEW years**. Please complete the form independently and do not consult with the intern. It should take about 40 minutes. The completed form should be handed it back to the interviewer.

It would be very helpful if you would agree to a short interview following completion of the questionnaire to discuss how those competencies identified as "not prepared" or "fully prepared" might relate to the MBBCh curriculum.

Confidentiality: Please don't write your name on the form. A Supervisor Research Code will be the only identification used in analysing or reporting the survey results. I undertake to treat any information that you give me IN THE STRICTEST CONFIDENCE and all reports will use only grouped or coded data which cannot be traced back to you.
Thank you in anticipation
Mrs Bridget Smuts, Tel: (011) 717-2073 or 073 171 9126 Email: smutsb@chse.wits.ac.za

**IRC**

**Please complete the following for Intern**

Domain: (Department or unit) ……

Length of time you have known the intern concerned …… (weeks)

Length of time you have been involved with Intern supervision …… (years)

**DEFINITION**: In this study, the term PREPARATION for INTERNSHIP includes theoretical knowledge, procedural skills, interpersonal skills, judgement, professional attitudes and values.

Please rate the intern on EACH item in terms of how well prepared he/she was to perform competently in this area in the first few weeks of his/her internship.

**Please TICK a box from 1-5 according to the following descriptions:**
**1= not prepared**: the intern does not know enough or does not appear competent to perform safely, even with supervision
**2= prepared below expectations:** the intern is unsure of his/her factual knowledge or seems hesitant in performing tasks
**3= fairly well prepared**: the intern is fairly sure of his/her knowledge or is competent to perform adequately under close supervision
**4= prepared**: the intern has good knowledge or is competent to perform to expectation on his/her own and only needs minimal supervision
**5= fully prepared:** the intern has excellent knowledge or is able to perform at a level of expertise well above his/her peers
**Not applicable**: please use only if it is not possible to make a judgement

| | **DURING THE FIRST ROTATION, HOW PREPARED WAS THIS INTERN IN ….?** | **PREPAREDNESS** - | | | | + | **n/a** |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | remembering and applying basic sciences (chemistry, physics, anatomy, physiology, molecular medicine and haematology) in understanding patients' illness and when discussing cases | | | | | | |
| 2 | applying his/her knowledge of anatomical pathology, pathophysiology and microbiology to understand the disease processes encountered | | | | | | |
| 3 | applying his/her knowledge of therapeutics, pharmacokinetics and pharmacodynamics to safely prescribe routine medicines | | | | | | |
| 4 | applying the theory of interpersonal and communication skills to all doctor-patient and doctor/colleague relationships | | | | | | |
| 5 | taking good patient histories from patients and family members | | | | | | |
| 6 | focusing his/her history without losing important information | | | | | | |
| 7 | performing a thorough physical examination on adult patients | | | | | | |
| 8 | performing a thorough physical examination on children | | | | | | |
| 9 | eliciting and interpreting physical signs | | | | | | |

| | DURING THE FIRST ROTATION, HOW PREPARED WAS THIS INTERN IN ….? | PREPAREDNESS - | | | | + | n/a |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 10 | requesting or performing appropriate special investigations (tests, x-rays, etc) for particular conditions | | | | | | |
| 11 | requesting only tests that are really necessary so as to save on costs | | | | | | |
| 12 | writing good, complete patient notes which other members of the health care team can use in planning their patient care | | | | | | |
| 13 | analysing and interpreting patient data from various sources so as to identify problems, develop and test hypotheses and come up with reasonable differential diagnoses | | | | | | |
| 14 | making decisions regarding initial management of the patients under his/her care | | | | | | |
| 15 | assisting competently with major surgery and anaesthesia | | | | | | |
| 16 | Performing an endotracheal intubation | | | | | | |
| 17 | performing minor surgical procedures competently on his/her own | | | | | | |
| 18 | performing basic clinical procedures adequately and safely | | | | | | |
| 19 | more specifically:<br>performing a venepuncture and take blood samples | | | | | | |
| 20 | inserting a nasogastric tube | | | | | | |
| 21 | putting up a drip (IV cannulation) | | | | | | |
| 22 | inserting an indwelling urinary catheter (male patient) | | | | | | |
| 23 | taking an ECG recording | | | | | | |
| 24 | initiating basic life support (CPR) | | | | | | |
| 25 | taking an accurate blood pressure measurement | | | | | | |
| 26 | putting in a central venous line | | | | | | |
| 27 | performing a lumbar puncture | | | | | | |
| 28 | responding effectively in an emergency | | | | | | |
| 29 | prioritising the patients needing immediate care (triage) | | | | | | |
| 30 | formulating an orderly patient care plan from admission to discharge (including investigation, observations, therapy, medications, counselling) | | | | | | |
| 31 | Involving the patient and his/her family in planning care | | | | | | |
| 32 | managing chronic conditions and following his/her patients' progress in outpatient clinics | | | | | | |
| 33 | identifying risk factors and giving patients the education they need to change their behaviour so as to promote health and prevent disease | | | | | | |
| 34 | working with ambulatory patients in clinics and outpatient departments | | | | | | |
| 35 | providing the best possible care for his/her patients within the delivery constraints of the SA health care system | | | | | | |
| 36 | taking into account the patient's home circumstances when planning for discharge and aftercare | | | | | | |
| 37 | Incorporating knowledge of SA communities and cultures in caring for his/her patients | | | | | | |
| 38 | incorporating ethical principles (beneficence, non-maleficence, autonomy and justice) into his/her practice of medicine | | | | | | |

| | DURING THE FIRST ROTATION, HOW PREPARED WAS THIS INTERN IN ….? | PREPAREDNESS - | | | | + | n/a |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 39 | dealing respectfully with all patients and colleagues | | | | | | |
| 40 | knowing his/her patient's rights and assisting them to stand up for their rights (patient advocacy) | | | | | | |
| 41 | knowing about medico-legal risks and working within the law | | | | | | |
| 42 | asking appropriate questions in a manner which allows the patient time to give full answers | | | | | | |
| 43 | supporting and/or counselling a dying patient and his/her relatives | | | | | | |
| 44 | adapting his/her communication style appropriately when talking to colleagues, or to patients and family members of diverse cultures and educational or socioeconomic backgrounds | | | | | | |
| 45 | presenting patient cases to seniors and colleagues during ward rounds and teaching sessions | | | | | | |
| 46 | developing good professional relationships with others in the health team (nursing staff, colleagues, therapists, admin staff) | | | | | | |
| 47 | carrying a full share of the routine work load without burdening others with things that should have been done | | | | | | |
| 48 | accepting constructive feedback positively in order to learn from his/her mistakes and improve his/her clinical skills | | | | | | |
| 49 | knowing the roles and skills of other health professionals so that he/she can enlist their help or refer patients to them where appropriate | | | | | | |
| 50 | finding up-to-date information to improve his/her knowledge about the conditions with which the patients present | | | | | | |
| 51 | recognising when his/her knowledge was not sufficient to safely undertake a procedure | | | | | | |
| 52 | asking the appropriate person for help when necessary | | | | | | |
| 53 | using research articles and evidence based medicine (eg. Cochrane) searches to reflect on, and make sense of, complex patient management problems | | | | | | |
| 54 | taking responsibility, and being accountable, for his/her role in the patient's care | | | | | | |
| 55 | coping with the long hours and demands of internship | | | | | | |
| 56 | managing his/her time so as to maintain a balance between work demands and personal life | | | | | | |
| 57 | coping with the uncertainty that doctors sometimes face (ie. having to start management of patents' conditions without always knowing the final diagnosis) | | | | | | |

**How would you rate the competence of this intern compared to other WITS interns that you have supervised in the past few years (please circle the appropriate number)**

**1 Weaker 2 Similar 3 Superior**

**How would you rate the competence of this intern compared to interns from OTHER UNIVERSITIES**

**1 Weaker 2 Similar 3 Superior**

**Thank you!**

SRC

**Interview Guide for Discussion with Intern Supervisor after Completing the Questionnaire**
(This interview is conducted after the researcher has read the intern supervisor's responses to the questionnaire and highlighted those items which received a score of 1 (2) or 5. These qualitative data will be used to help explain or clarify the numerical questionnaire data).

Thank you for filling in the questionnaire. I would like us to look particularly at those items to which you responded with a 1(2) or a 5:
**1= not prepared** (the intern does not know enough or does not appear competent to perform safely even with supervision
**5=fully prepared** (the intern has excellent knowledge or is able to perform at a level of expertise well above his/her peers).

**Why did you give these rankings?**
Do you think this is part of the intern situation?
Do you think that these aspects are learned during the undergraduate years?
Do you think that this is related more to individual personality?
Are you able to make suggestions as to how the curriculum might be altered in order to improve these areas?

If, after our discussion, you think that perhaps you misunderstood any items or responded incorrectly, we can change your answer, but I will mark these as changed and give a reason for each change.

**Items marked 1 (2)**

| Item# | Comment |
|---|---|

……

……

……

**Items marked 5**

……

……

……

**Any further comments?**

| CRC: | PRC: |
|---|---|

# COLLEAGUE INTERVIEW

INFORMATION AND CONSENT ON INTERPERSONAL SKILLS AND TEAM WORK

Dear Health Care Team Member or Intern Peer

Thank you for agreeing to see me. My name is Bridget Smuts and I work at Wits Medical School in Johannesburg. I'm part of the team which plans the teaching and learning (curriculum) for our medical students. Prof Kate Hammond is assisting me.

Wits University introduced a new medical course in 2003 which uses different teaching methods and has an integrated approach to the content. It also allows graduates with a suitable first degree to join the mainstream students for the final four years of the degree. It's important that we evaluate the outcomes of this new curriculum and we think that the best way to do this is speak to the interns themselves, their clinical supervisors, colleagues and patients about how well they think the Wits undergraduate education has prepared its graduates to be good doctors.

You've been invited to talk to me because you have worked closely with one or more of our students, who is now an intern in the health care team. I would like to ask you a few questions about the intern's contribution to the health care team. S/he knows that I am going to speak to you and has given me written permission. Your participation is voluntary. If you choose not to take part there will be no negative consequences.

- I have given you a number so that your name will not appear in this research at all. Your opinion will be kept strictly confidential.
- The doctor concerned will **not** see your comments and they will not be used for any other purpose than this research.
- If I ask a question that you don't want to answer, just tell me and I'll skip that one
- The doctor will not get into trouble if you say that he/she doesn't do something well. Please be as honest as possible.

If you agree to speak to me, please sign here:
I consent to being interviewed provided that my name is not used at all. I understand that I may withdraw from the interview at any stage, or not answer specific questions.

Signed: ……. Date ……1

How long have you worked with this Doctor ……

**Please tick a box from 1 to 5 according to the following descriptions:**

**1= not prepared** – the intern does not know enough or does not appear competent to perform safely, even with supervision

**2= prepared below expectations** – the intern is unsure of his/her factual knowledge or seems hesitant in performing tasks

**3= fairly well prepared** – the intern is fairly sure of his/her knowledge or is competent to perform adequately under close supervision

**4= prepared** – the intern has good knowledge or is competent to perform to expectation on his/her own and only needs minimal supervision

**5= fully prepared** – the intern has excellent knowledge or is able to perform at a level of expertise well above his/her peers

**Not applicable**: please use only if it is not possible to make a judgement

| **DURING THE FIRST ROTATION, HOW <u>WELL PREPARED</u> WAS THIS INTERN, COMPARED TO OTHER NEW INTERNS THAT YOU HAVE WORKED WITH, IN THE FOLLOWING AREAS ….?** | | **COMPETENCE - +** | | | | | **n/a** |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 1 | performing minor surgical procedures competently on his/her own (eg. putting up drips, taking bloods, suturing etc) | | | | | | |
| Comment: | | | | | | | |
| 2 | responding effectively in an emergency | | | | | | |
| Comment: | | | | | | | |
| 3 | prioritising the patients needing immediate care (triage) | | | | | | |
| Comment: | | | | | | | |
| 4 | formulating an orderly patient care plan from admission to discharge (including investigation, observations, therapy, medications, counselling) | | | | | | |
| Comment: | | | | | | | |
| 5 | managing chronic conditions and following his/her patients' progress in outpatient clinics | | | | | | |
| Comment: | | | | | | | |
| 6 | identifying risk factors and giving patients the education they need to change their behaviour so as to promote health and prevent disease | | | | | | |
| Comment: | | | | | | | |
| 7 | performing basic clinical procedures adequately and safely | | | | | | |
| Comment: | | | | | | | |
| 8 | incorporating ethical principles (beneficence, non-maleficence, autonomy and justice) into his/her practice of medicine | | | | | | |
| Comment: | | | | | | | |
| 9 | dealing respectfully with all patients and colleagues | | | | | | |
| Comment: | | | | | | | |
| 10 | knowing his/her patient's rights and assisting them to stand up for their rights (patient advocacy) | | | | | | |
| Comment: | | | | | | | |
| 11 | knowing about medico-legal risks and working within the law | | | | | | |
| Comment: | | | | | | | |
| 12 | asking appropriate questions in a manner which allows the patient time to give full answers | | | | | | |
| Comment: | | | | | | | |
| 13 | supporting and/or counselling a dying patient and his/her relatives | | | | | | |
| Comment: | | | | | | | |
| 14 | adapting his/her communication style appropriately when talking to colleagues, or to patients and family members of diverse cultures and educational or socioeconomic backgrounds | | | | | | |
| Comment: | | | | | | | |
| 15 | presenting patient cases to seniors and colleagues during ward rounds and teaching sessions | | | | | | |
| Comment: | | | | | | | |

| **DURING THE FIRST ROTATION, HOW <u>WELL PREPARED</u> WAS THIS INTERN, COMPARED TO OTHER NEW INTERNS THAT YOU HAVE WORKED WITH, IN THE FOLLOWING AREAS ….?** | | **COMPETENCE - +** | | | | | **n/a** |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | |
| 16 | developing good professional relationships with others in the health team (nursing staff, colleagues, therapists, admin staff) | | | | | | |
| Comment: | | | | | | | |
| 17 | carrying a full share of the routine work load without burdening others with things that should have been done | | | | | | |
| Comment: | | | | | | | |
| 18 | dealing with and accepting constructive feedback positively in order to learn from his/her mistakes and improve his/her clinical skills | | | | | | |
| Comment: | | | | | | | |
| 19 | knowing the roles and skills of other health professionals so that he/she can enlist their help or refer patients to them where appropriate | | | | | | |
| Comment: | | | | | | | |
| 20 | taking responsibility, and being accountable, for his/her role in the patient's care | | | | | | |
| Comment: | | | | | | | |
| 21 | coping with the long hours and demands of internship | | | | | | |
| Comment: | | | | | | | |
| 22 | managing his/her time so as to maintain a balance between work demands and personal life | | | | | | |
| Comment: | | | | | | | |
| 23 | coping with the uncertainty that doctors sometimes feel | | | | | | |
| Comment: | | | | | | | |

**The interviewer then asks questions relating areas with scores of <u>1 or 5</u> to UNDERGRADUATE training.**

Prompts:
Do you think these aspects are learned during the undergraduate years?

Are they related more to individual personality?

Are you able to make suggestions as to how the curriculum might be altered to improve intern education in these areas?
THANK YOU

PtRC:

# INFORMATION AND CONSENT FOR PATIENT INTERVIEW ON INTERPERSONAL SKILLS AND ETHICAL MATTERS

Dear Patient

Thank you for agreeing to see me. My name is Bridget Smuts and I work at Wits Medical School in Johannesburg. I am one of the lecturers who teaches the medical students when they are at University. We want to see if we are training them well. Professor Kate Hammond will be assisting me.

**INFORMATION**

Wits University introduced a new medical course in 2003 which uses different teaching methods and has an integrated approach to the content. It also allows graduates with a suitable first degree to enter the third year of medicine. They join the mainstream students for the final four years of the degree. It's important that we evaluate the outcomes of this new curriculum and we think that the best way to do this is to speak to the interns themselves, their clinical supervisors, their colleagues and their patients to find out how well Wits has prepared its graduates to be good doctors.

You've been invited to talk to me because one of our students has been your doctor. I would value your comments but this is entirely voluntary and if you choose not to take part there will be no negative consequences.

I would like to ask you a few questions about the doctor (intern) who has been looking after you. He/she knows that I am going to speak to you and has given me written permission.

CONSENT

- You don't have to speak to me if you don't want to – this interview is voluntary and you must tell me if you want me to stop at any time and I won't mind or be angry
- I have given you a number so that your name will not appear on this paper at all. This is so that your words are kept confidential (private)
- If I ask a question that you don't want to answer, just tell me and I will skip that one
- The doctor will not get into trouble if you say that he/she doesn't do something well. Please be as honest as possible.

If you agree to speak to me, please sign here:
I agree to be interviewed provided that my name is not used. I understand that I can decide not to answer particular questions and I can stop the interview at any time.

Signed: ……. Date …….

**NB: The intern will be asked to personally introduce the interviewer to the patient to ensure that s/he knows which doctor we are talking about.**

**Wording my have to be adapted to the patient's understanding of English or Afrikaans. If necessary an interpreter will be used**

PATIENT INTERVIEW SCHEDULE

1 Do you know this doctor? When did you first meet your doctor? (to establish that we are discussing the correct person and that the patient has known the doctor long enough to answer the questions).

Y/N: ……
Time: ……

**The researcher will ask each of the questions and write down the patient's responses *verbatim*. If the patient does not understand the question the researcher will explain. At the end of each interview the researcher will allocate a global score for the interview based upon the following rubric:**

**Score =1 or 2: the patient did not answer fully or seemed unsure of what to say.**
**Score = 3: the patient answered all questions but did not elaborate**
**Score = 4: the patient answered all questions fully giving some examples**
**Score = 5: the patient answered all questions fully, volunteered additional information to clarify and supported comments with anecdotal evidence**

| | |
|---|---|
| **5** | **Professional attitudes and values** |
| | (dealing respectfully with all patients and colleagues)<br>5.2 Did s/he tell you his/her name?<br><br>5.2 Are you happy with the way in which your doctor addresses you?<br><br>Tell me why you say this: |
| | (incorporating ethical principles (beneficence, non-maleficence, autonomy and justice) into his/her practice of medicine)<br>5.1 Has your doctor told you what is wrong with you?<br>What did s/he say? |
| **3** | **Holistic patient management and skills** |
| | 3.7 Has your doctor asked you if you know about the treatment and what is best for you?<br><br>Did you understand everything? (or why did you not ask?).<br><br>3.8 Has your doctor explained how your can change the things that you do to stay more healthy? (eg. diet, stop smoking, take more exercise, etc). What did he/she say to you? |

| | |
|---|---|
| | |
| **6** | **Effective communication skills** |
| | (adapting his/her communication style appropriately when talking to colleagues, or to patients and family members of diverse cultures and educational or socioeconomic backgrounds)<br>6.1 Do you and your doctor understand each other's language?<br><br>How do you know that your doctor understands what you are saying?<br><br>6.3 Have you ever asked your doctor about what is worrying you?<br><br>How did s/he respond to you then? |
| | (asking appropriate questions in a manner which allows the patient time to give full answers)<br>6.1 Does your doctor give you time to say all the things that you want to say? Can you tell me about such a time? |
| | (supporting and/or counselling e.g. bad news, a dying patient and his/her relatives, etc)<br>6.3 Has your doctor had to tell you anything that was difficult for you to hear (eg. bad news)? How did he/she do it? |
| **9** | **Personal attributes (intangible personal resources)** |
| | (taking responsibility, & being accountable, for his/her role in the patient's care)<br>9.4 Has your doctor ever had to do something which hurt you physically?<br><br>How did he/she approach you then? Tell me about it? |
| **4** | **Community health** |
| | (taking into account the patient's home circumstances when planning for discharge and aftercare)<br>4.2 Has your doctor discussed what will happen when you go home? What did s/he say? |

Is there anything else that you want to tell me?

**GLOBAL SCORE =** ☐

THANK YOU FOR TALKING TO ME. I HOPE THAT YOU FEEL BETTER SOON

**APPENDIX C1**

Table C1 Full table of interns' questionnaire scores

| Category | Item no (prob =) | Year | n= | Not well prepared | Fairly well prepared | Well prepared | Fully prepared |
|---|---|---|---|---|---|---|---|
| Category 1 Fundamental theoretical knowledge | 1 (1.1) | 2006 | 75 | 6(8.00) | 30(40.00) | 29(38.67) | 10(13.33) |
| | *p = 0.06 | 2007 | 76 | 2(2.63) | 21(27.63) | 45(59.21) | 8(10.53) |
| | 2 (1.2) | 2006 | 75 | 3(4.00) | 33(44.00) | 30(40.00) | 9(12.00) |
| | **p = 0.009** | 2007 | 76 | 18(23.68) | 27(35.53) | 28(36.84) | 3(3.95) |
| | 3 (1.3) | 2006 | 76 | 18(23.68) | 24(31.58) | 27(35.53) | 7(9.21) |
| **p=0.01 inconclusive** | **p = <.0001** | 2007 | 76 | 37(48.68) | 29(38.16) | 7(9.21) | 3(3.95) |
| | 4 (1.4) | 2006 | 75 | 9(12.00) | 15(20.00) | 32(42.67) | 19(25.33) |
| | ***p = <.0001** | 2007 | 75 | 0(0.00) | 4(5.33) | 23(30.67) | 48(64.00) |
| Category 2 Clinical judgement and medical problem solving | 5 (2.1) | 2006 | 76 | 2(2.63) | 2(2.63) | 27(35.53) | 45(59.21) |
| | *p = 0.56 | 2007 | 76 | 0(0.00) | 2(2.63) | 23(30.26) | 51(67.11) |
| | 6 (2.2) | 2006 | 75 | 1(1.33) | 3(4.00) | 34(45.33) | 37(49.33) |
| | *p = 0.59 | 2007 | 76 | 0(0.00) | 6(7.89) | 31(40.79) | 39(51.32) |
| | 7 (2.3) | 2006 | 74 | 1(1.35) | 6(8.11) | 23(31.08) | 44(59.46) |
| | *p = 0.34 | 2007 | 76 | 0(0.00) | 3(3.95) | 31(40.79) | 42(55.26) |
| | 8 (2.4) | 2006 | 65 | 4(6.15) | 10(15.38) | 22(33.85) | 29(44.62) |
| | *p = 0.20 | 2007 | 65 | 1(1.54) | 15(23.08) | 28(43.08) | 21(32.31) |
| **p=0.009** GEMP >Trad | 9 (2.5) | 2006 | 76 | 1(1.32) | 11(14.47) | 31(40.79) | 33(43.42) |
| | *p = 0.65 | 2007 | 75 | 0(0.00) | 9(12.00) | 37(49.33) | 29(38.67) |
| | 10 (2.6) | 2006 | 76 | 5(6.58) | 11(14.47) | 33(43.42) | 27(35.53) |
| | *p = 0.26 | 2007 | 76 | 1(1.32) | 9(11.84) | 42(55.26) | 24(31.58) |
| | 11 (2.7) | 2006 | 76 | 10(13.16) | 22(28.95) | 34(44.74) | 10(13.16) |
| | p = 0.32 | 2007 | 76 | 9(11.84) | 20(26.32) | 30(39.47) | 17(22.37) |
| | 12 (2.8) | 2006 | 76 | 3(3.95) | 13(17.11) | 34(22.37 | 26(34.21) |
| | *p = 1.00 | 2007 | 76 | 2(2.63) | 14(18.42) | 34(44.74) | 26(34.21) |
| | 13 (2.9) | 2006 | 76 | 5(6.58) | 22(28.95) | 39(51.32) | 10(13.16) |
| | *p = 0.41 | 2007 | 75 | 1(1.33) | 23(30.67) | 43(57.33) | 8(10.67) |
| | 14 (2.10) | 2006 | 76 | 10(13.16) | 20(26.32) | 35(46.05) | 11(14.47) |
| | p = 0.22 | 2007 | 76 | 3(3.95) | 22(28.95) | 37(48.68) | 14(18.42) |
| Category 3 Holistic patient management and skills | 15 (3.1) | 2006 | 70 | 8(11.43) | 15(21.43) | 27(38.57) | 20(28.57) |
| | p = 0.53 | 2007 | 68 | 7(10.29) | 12(17.65) | 27(39.71) | 22(32.35) |
| | 16 (3.2) | 2006 | 71 | 23(32.39) | 16(22.54) | 23(32.39) | 9(12.68) |
| | **p = 0.50** | 2007 | 71 | 22(30.99) | 27(38.03) | 12(16.90) | 10(14.08) |
| | 17 (3.3) | 2006 | 71 | 25(35.21) | 18(25.35) | 19(26.76) | 9(12.68) |
| | p = 0.34 | 2007 | 72 | 22(30.56) | 17(23.61) | 19(26.39) | 14(19.44) |
| **p=0.0004** GEMP >Trad | 18 (3.4) | 2006 | 73 | 7(9.59) | 11(15.07) | 25(34.25) | 30(41.10) |
| | ***p = 0.04** | 2007 | 72 | 0(0.00) | 9(12.50) | 29(40.28) | 34(47.22) |
| | 19 (3.5) | 2006 | 76 | 1(1.32) | 1(1.32) | 6(7.89) | 68(89.47) |
| | *p = 0.66 | 2007 | 76 | 0(0.00) | 1(1.32) | 3(3.95) | 72(94.74) |
| | 20 (3.6) | 2006 | 75 | 6(8.00) | 8(10.67) | 7(9.33) | 54(72.00) |
| | *p = 0.17 | 2007 | 76 | 2(2.63) | 6(7.89) | 15(19.74) | 53(69.74) |
| | 21 (3.7) | 2006 | 75 | 1(1.33) | 3(4.00) | 3(4.00) | 68(90.67) |
| | ***p = 0.03** | 2007 | 76 | 0(0.00) | 0(0.00) | 10(13.16) | 66(86.84) |
| | 22 (3.8) | 2006 | 75 | 0(0.00) | 4(5.33) | (5)6.67 | 66(88.00) |
| | *p = 0.13 | 2007 | 76 | 0(0.00) | (0)0.00 | 7(9.21) | 69(90.79) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 23 (3.9) | 2006 | 75 | 0(0.00) | 3(4.00) | 9(12.00) | 63(84.00) |
| | p = 0.50 | 2007 | 76 | 0(0.00) | 2(2.63) | 5(6.58) | 69(90.79) |
| | 24 (3.10) | 2006 | 75 | 8(10.67) | 23(30.67) | 24(32.00) | 20(26.67) |
| | **p = 0.01** | 2007 | 76 | 4(5.26) | 13(17.11) | 27(35.53) | 32(42.11) |
| | 25 (3.11) | 2006 | 76 | 0(0.00) | 3(3.95) | 6(7.89) | 67(88.16) |
| | *p = 0.76 | 2007 | 74 | 0(0.00) | 1(1.35) | 5(6.76) | 68(91.89) |
| | 26 (3.12) | 2006 | 74 | 43(58.11) | 18(24.32) | 9(12.16) | 4(5.41) |
| | *p = 0.54 | 2007 | 75 | 35(46.67) | 25(33.33) | 10(13.33) | 5(6.67) |
| | 27 (3.13) | 2006 | 75 | 10(13.33) | 10(13.33) | 16(21.33) | 39(52.00) |
| | p = 0.07 | 2007 | 75 | 2(2.67) | 7(9.33) | 22(29.33) | 44(58.67) |
| | 28 (3.14) | 2006 | 75 | 16(21.33) | 27(36.00) | 27(36.00) | 5(6.67) |
| | p = 0.19 | 2007 | 76 | 13(17.11) | 23(30.26) | 31(40.79) | 9(11.84) |
| | 29 (3.15) | 2006 | 74 | 12(16.22) | 25(33.78) | 25(33.78) | 12(16.22) |
| | p = 0.19 | 2007 | 76 | 7(9.24) | 19(25.00) | 37(48.68) | 13(17.11) |
| | 30 (3.16) | 2006 | 76 | 8(10.53) | 17(22.37) | 42(55.26) | 9(11.84) |
| | p = 0.88 | 2007 | 76 | 4(5.26) | 24(31.58) | 36(47.37) | 12(15.79) |
| | 31 (3.17) | 2006 | 75 | 12(16.00) | 25(33.33) | 27(36.00) | 11(14.67) |
| | **p = 0.006** | 2007 | 76 | 4(5.26) | 18(23.68) | 35(46.05) | 19(25.00) |
| | 32 (3.18) | 2006 | 72 | 10(13.89) | 19(26.39) | 21(44.44) | 11(15.28) |
| | p = 0.66 | 2007 | 74 | 6(8.11) | 21(28.38) | 37(50.00) | 10(13.51) |
| | 33 (3.19) | 2006 | 76 | 5(6.58) | 9(11.84) | 35(46.05) | 27(35.53) |
| | *p = 0.50 | 2007 | 75 | 2(2.67) | 8(10.67) | 31(41.33) | 34(45.33) |
| Category 4 Community Health | 34 (4.1) | 2006 | 73 | 6(8.22) | 25(34.25) | 31(42.47) | 11(15.07) |
| | **p = 0.047** | 2007 | 75 | 6(8.00) | 13(17.33) | 39(52.00) | 17(22.67) |
| | 35 (4.2) | 2006 | 76 | 6(7.89) | 22(28.95) | 37(48.68) | 11(14.47) |
| | p = 0.76 | 2007 | 76 | 6(7.89) | 21(27.63) | 36(47.37) | 13(17.11) |
| **p=0.0002** GEMP >Trad | 36 (4.3) | 2006 | 76 | 19(25.00) | 21(27.63) | 21(27.63) | 15(19.74) |
| | **p = 0.003** | 2007 | 76 | 2(2.63) | 22(28.95) | 32(42.11) | 20(26.32) |
| | 37 (4.4) | 2006 | 76 | 17(22.37) | 20(26.32) | 24(31.58) | 15(19.74) |
| | **p = 0.01** | 2007 | 76 | 4(5.26) | 21(27.63) | 29(38.16) | 22(28.95) |
| Category 5 Professional values and attitudes (ethics) | 38 (5.1) | 2006 | 76 | 10(13.16) | 16(21.05) | 28(36.84) | 22(28.95) |
| | p = 0.13 | 2007 | 76 | 3(3.95) | 13(17.11) | 35(46.05) | 25(32.89) |
| | 39 (5.2) | 2006 | 76 | 2(2.63) | 5(6.58) | 23(30.26) | 46(60.53) |
| | *p = 0.73 | 2007 | 76 | 0(0.00) | 6(7.89) | 24(31.58) | 46(60.53) |
| | 40 (5.3) | 2006 | 76 | 4(5.26) | 22(28.95) | 32(42.11) | 18(23.68) |
| | *p = 0.59 | 2007 | 76 | 5(6.58) | 19(25.00) | 27(35.53) | 25(32.89) |
| p=0.37 n/s | 41 (5.4) | 2006 | 76 | 15(19.74) | 28(36.84) | 23(30.26) | 10(13.16) |
| | p = 0.58 | 2007 | 76 | 14(18.42) | 23(30.26) | 31(40.79) | 8(10.53) |
| Category 6 Effective communica-tion skills | 42 (6.1) | 2006 | 76 | 4(5.26) | 15(19.74) | 36(47.37) | 21(27.63) |
| | p = 0.33 | 2007 | 76 | 2(2.63) | 8(10.53) | 42(55.26) | 24(31.58) |
| | 43 (6.2) | 2006 | 73 | 25(34.25) | 19(26.03) | 23(31.51) | 6(8.22) |
| | **p = 0.002** | 2007 | 76 | 9(11.84) | 22(28.95) | 31(40.79) | 14(18.42) |
| | 44 (6.3) | 2006 | 76 | 4(5.26) | 17(22.37) | 28(36.84) | 27(35.53) |
| **p=0.02** GEMP >Trad | *p = 0.34 | 2007 | 76 | 3(3.95) | 9(11.84) | 34(44.74) | 30(39.47) |
| | 45 (6.4) | 2006 | 75 | 1(1.33) | 7(9.33) | 33(44.00) | 34(45.33) |
| | *p = 0.92 | 2007 | 76 | 2(2.63) | 8(10.53) | 35(46.05) | 31(40.79) |
| Category 7 Working with others in | 46 (7.1) | 2006 | 76 | 2(2.63) | 5(6.58) | 30(39.47) | 39(51.32) |
| | *p = 0.64 | 2007 | 76 | 1(1.32) | 2(2.63) | 30(39.47) | 43(56.58) |
| | 47 (7.2) | 2006 | 76 | 1(1.32) | 4(5.26) | 29(38.16) | 42(55.26) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a team | *p = 0.14 | 2007 | 75 | 0(0.00) | 5(6.67) | 18(24.00) | 52(69.33) |
| | 48 (7.3) | 2006 | 76 | 2(2.63) | 8(10.53) | 28(36.84) | 38(50.00) |
| p=0.33 n/s | *p = 0.75 | 2007 | 76 | 1(1.32) | 8(10.53) | 34(44.74) | 33(43.42) |
| | 49 (7.4) | 2006 | 76 | 3(3.95) | 12(15.79) | 32(42.11) | 29(38.16) |
| | *p = 0.46 | 2007 | 76 | 2(2.63) | 7(9.21) | 30(39.47) | 37(48.68) |
| Category 8 | 50 (8.1) | 2006 | 75 | 15(20.00) | 25(33.33) | 22(29.33) | 13(17.33) |
| Self directed | **p = <.0001** | 2007 | 74 | 2(2.70) | 14(18.92) | 32(43.24) | 26(35.14) |
| learning | 51 (8.2) | 2006 | 76 | 0(0.00) | 6(7.89) | 30(39.47) | (40)52.63 |
| | *p = 0.91 | 2007 | 76 | 1(1.32) | 7(9.21) | 31(40.79) | 37(48.68) |
| **p<0.0001** | 52 (8.3) | 2006 | 74 | 0(0.00) | 6(8.11) | 18(24.32) | 50(67.57) |
| GEMP >Trad | *p = 0.43 | 2007 | 75 | 1(1.33) | 4(5.33) | 25(33.33) | 45(60.00) |
| | 53 (8.4) | 2006 | 75 | 38(50.67) | 20(26.67) | 9(12.00) | 8(10.67) |
| | **p = <.0001** | 2007 | 73 | 7(9.59) | 19(26.03) | 33(45.21) | 14(19.18) |
| Category 9 | 54 (9.1) | 2006 | 76 | 1(1.32) | 11(14.47) | 37(48.68) | 27(35.53) |
| Confidence | *p = 0.98 | 2007 | 76 | 1(1.32) | 12(15.79) | 38(50.00) | 25(32.89) |
| and personal | 55 (9.2) | 2006 | 75 | 18(24.00) | 17(22.67) | 20(26.67) | 20(26.67) |
| attributes | p = 0.71 | 2007 | 76 | 14(18.42) | 20(26.32) | 22(28.95) | 20(26.32) |
| (intangible | 56 (9.3) | 2006 | 76 | 23(30.26) | 18(23.68) | 23(30.26) | 12(15.79) |
| personal | p =0.23 | 2007 | 76 | 16(21.05) | 21(27.63) | 22(28.95) | 17(22.37) |
| resources) | 57 (9.4) | 2006 | 76 | 15(19.74) | 25(32.89) | 29(38.16) | 7(9.21) |
| p=0.34 n/s | p =0.40 | 2007 | 76 | 10(13.16) | 27(35.53) | 30(39.47) | 9(11.84) |

Note: * = Fisher's Exact

**APPENDIX C2**

Table C2 Full table of supervisors' questionnaire scores

| Category | Item no (prob =) | Year | n= | Not well prepared | Fairly well prepared | Well prepared | Fully prepared |
|---|---|---|---|---|---|---|---|
| Category 1 Fundamental theoretical knowledge | 1 (1.1) | 2006 | 76 | 4(5.26) | 19(25.00) | 46(60.53) | 7(9.21) |
| | p = 0.15 | 2007 | 75 | 4(5.33) | 27(36.00) | 40(53.33) | 4(5.33) |
| | 2 (1.2) | 2006 | 76 | 7(9.21) | 23(30.26) | 38(50.00) | 8(10.53) |
| | *p = 0.47 | 2007 | 74 | 4(5.41) | 31(41.89) | 33(44.59) | 6(8.11) |
| | 3 (1.3) | 2006 | 76 | 2(2.63) | 38(50.00) | 31(40.79) | 5(6.58) |
| p=0.47 n/s | *p = 0.14 | 2007 | 75 | 8(10.67) | 29(38.67) | 35(46.67) | 3(4.00) |
| | 4 (1.4) | 2006 | 76 | 6(7.89) | 6(7.89) | 25(32.89) | 39(51.32) |
| | *p = 0.13 | 2007 | 76 | 2(2.63) | 5(6.58) | 38(50.00) | 31(40.79) |
| Category 2 Clinical judgement and medical problem solving | 5 (2.1) | 2006 | 76 | 2(2.63) | 9(11.84) | 39(51.32) | 26(34.21) |
| | p = 0.18 | 2007 | 75 | 0(0.00) | 9(12.00) | 32(42.67) | 34(45.33) |
| | 6 (2.2) | 2006 | 76 | 5(6.58) | 15(19.74) | 39(51.32) | 17(22.37) |
| | *p = 0.76 | 2007 | 76 | 2(2.63) | 15(19.74) | 40(52.63) | 19(25.00) |
| | 7 (2.3) | 2006 | 68 | 2(2.94) | 12(17.65) | 35(51.47) | 19(27.94) |
| | *p = 0.47 | 2007 | 61 | 3(4.92) | 9(14.75) | 38(62.30) | 11(18.03) |
| | 8 (2.4) | 2006 | 34 | 0(0.00) | 6(17.65) | 18(52.94) | 10(29.41) |
| | *p = 0.06 | 2007 | 31 | 1(3.23) | 7(22.58) | 21(67.74) | 2(6.45) |
| p=0.32 n/s | 9 (2.5) | 2006 | 74 | 1(1.35) | 17(22.97) | 44(59.46) | 12(16.22) |
| | *p = 0.90 | 2007 | 75 | 1(1.33) | 18(24.00) | 41(54.67) | 15(20.00) |
| | 10 (2.6) | 2006 | 75 | 3(4.00) | 21(28.00) | 35(46.67) | 16(21.33) |
| | *p = 0.88 | 2007 | 75 | 4(5.33) | 18(24.00) | 34(45.33) | 19(25.33) |
| | 11 (2.7) | 2006 | 74 | 7(9.46) | 35(47.30) | 25(33.78) | 7(9.46) |
| | p = 0.24 | 2007 | 73 | 12(16.44) | 32(43.84) | 28(38.36) | 1(1.37) |
| | 12 (2.8) | 2006 | 76 | 2(2.63) | 10(13.16) | 40(52.63) | 24(31.58) |
| | *p = 0.13 | 2007 | 74 | 4(5.41) | 18(24.32) | 38(51.35) | 14(18.92) |
| | 13 (2.9) | 2006 | 73 | 2(2.74) | 25(34.25) | 38(52.05) | 8(10.96) |
| | *p = 0.27 | 2007 | 75 | 7(9.33) | 29(38.67) | 30(40.00) | 9(12.00) |
| | 14 (2.10) | 2006 | 75 | 3(4.00) | 30(40.00) | 34(54.33) | 8(10.67) |
| | *p = 0.77 | 2007 | 76 | 5(6.58) | 34(44.74) | 29(38.16) | 8(10.53) |
| Category 3 Holistic patient management and skills | 15 (3.1) | 2006 | 51 | 3(5.88) | 13(25.49) | 20(39.22) | 15(29.41) |
| | *p=.49 | 2007 | 34 | 2(5.88) | 14(41.18) | 10(29.41) | 8(23.53) |
| | 16 (3.2) | 2006 | 27 | 5(18.52) | 11(40.74) | 6(22.22) | 5(18.52) |
| | **#*p=0.009** | 2007 | 32 | 14(43.75) | 7(21.88) | 11(34.38) | 0(0.00) |
| | 17 (3.3) | 2006 | 52 | 7(13.46) | 14(26.92) | 18(34.62) | 13(25.00) |
| | p = 0.17 | 2007 | 39 | 6(15.38) | 15(38.46) | 13(33.33) | 5(12.82) |
| p=0.17 n/s | 18 (3.4) | 2006 | 72 | 3(4.17) | 15(20.83) | 37(51.39) | 17(23.61) |
| | *p = 0.56 | 2007 | 74 | 1(1.35) | 21(28.38) | 34(45.95) | 18(24.32) |
| | 19 (3.5) | 2006 | 76 | 0(0.00) | 7(9.21) | 22(28.95) | 47(61.84) |
| | p = 0.41 | 2007 | 75 | 0(0.00) | 5(6.67) | 19(25.33) | 51(68.00) |
| | 20 (3.6) | 2006 | 59 | 2(3.39) | 6(10.17) | 27(45.76) | 24(40.68) |
| | *p = 0.56 | 2007 | 58 | 0(0.00) | 5(8.62) | 24(41.38) | 29(50.00) |
| | 21 (3.7) | 2006 | 76 | 22(2.63) | 4(5.26) | 23(30.26) | 47(61.84) |
| | *p = 0.65 | 2007 | 75 | 0(0.00) | 6(8.00) | 23(30.67) | 46(61.33) |
| | 22 (3.8) | 2006 | 59 | 0(0.00) | 5(8.47) | 20(33.90) | 34(57.63) |
| | *p = 0.87 | 2007 | 61 | 1(1.64) | 4(6.56) | 23(37.70) | 33(54.10) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 23 (3.9) | 2006 | 50 | 2(4.00) | 4(8.00) | 19(38.00) | 25(50.00) |
| | *p = 0.29 | 2007 | 53 | 0(0.00) | 9(16.98) | 17(32.08) | 27(50.94) |
| | 24 (3.10) | 2006 | 58 | 5(8.62) | 12(20.69) | 32(55.17) | 9(15.52) |
| | p = 0.75 | 2007 | 53 | 6(11.32) | 13(24.53) | 19(35.85) | 15(28.30) |
| | 25 (3.11) | 2006 | 64 | 1(1.56) | 0(0.00) | 20(31.25) | 43(67.19) |
| | *p = 0.06 | 2007 | 65 | 2(3.08) | 5(7.69) | 24(36.92) | 34(52.31) |
| | 26 (3.12) | 2006 | 45 | 12(26.67) | 10(22.22) | 15(33.33) | 8(17.78) |
| | p = 0.16 | 2007 | 41 | 15(36.59) | 12(29.27) | 9(21.95) | 5(12.20) |
| | 27 (3.13) | 2006 | 35 | 1(2.86) | 4(11.43) | 16(45.71) | 14(40.00) |
| | *p = 0.63 | 2007 | 50 | 2(4.00) | 9(18.00) | 16(32.00) | 23(46.00) |
| | 28 (3.14) | 2006 | 73 | 4(5.48) | 14(19.18) | 31(42.47) | 24(32.88) |
| | *p = 0.96 | 2007 | 71 | 5(7.04) | 15(21.13) | 30(4225) | 21(29.58) |
| | 29 (3.15) | 2006 | 70 | 4(5.71) | 12(17.14) | 37(52.86) | 17(24.29) |
| | *p = 0.35 | 2007 | 68 | 3(4.41) | 20(29.41) | 28(41.18) | 17(25.00) |
| | 30 (3.16) | 2006 | 74 | 6(8.11) | 22(29.73) | 35(47.30) | 11(14.86) |
| | p = 0.54 | 2007 | 75 | 4(5.33) | 24(32.00) | 31(41.33) | 16(21.33) |
| | 31 (3.17) | 2006 | 74 | 3 (4.05) | 25(33.78) | 33(44.59) | 13(17.57) |
| | p = 0.71 | 2007 | 70 | 8(11.43) | 18(25.71) | 33(47.14) | 11(15.71) |
| | 32 (3.18) | 2006 | 60 | 5(8.33) | 14(23.33) | 32(53.33) | 9(15.00) |
| | p = 0.57 | 2007 | 59 | 3(5.08) | 20(33.90) | 28(47.46) | 8(13.56) |
| | 33 (3.19) | 2006 | 69 | 5(7.25) | 24(34.78) | 29(42.03) | 11(15.94) |
| | p = 0.85 | 2007 | 71 | 6(8.45) | 24(33.80) | 31(43.66) | 10(14.08) |
| Category 4 Community Health<br><br>p=0.26 n/s | 34 (4.1) | 2006 | 64 | 1(1.56) | 13(20.31) | 39(60.94) | 11(17.19) |
| | *p = 0.18 | 2007 | 67 | 4(5.97) | 18(26.87) | 29(43.28) | 16(23.88) |
| | 35 (4.2) | 2006 | 75 | 1(1.33) | 13(17.33) | 43(57.33) | 18(24.00) |
| | *p = 0.63 | 2007 | 75 | 2(2.67) | 17(22.67) | 35(46.67) | 21(28.00) |
| | 36 (4.3) | 2006 | 74 | 5(6.76) | 26(35.14) | 29(39.19) | 14(18.92) |
| | *p = 0.90 | 2007 | 71 | 4(5.63) | 24(33.80) | 26(36.62) | 17(23.94) |
| | 37 (4.4) | 2006 | 72 | 5(6.94) | 26(36.11) | 28(38.89) | 13(18.06) |
| | p = 0.23 | 2007 | 75 | 6(8.00) | 19(25.33) | 31(41.33) | 19(25.33) |
| Category 5 Professional values and attitudes (ethics)<br><br>p=0.14 n/s | 38 (5.1) | 2006 | 75 | 2(2.67) | 20(26.67) | 34(45.33) | 19(25.33) |
| | *p = 0.64 | 2007 | 72 | 1(1.39) | 17(23.61) | 29(40.28) | 25(34.72) |
| | 39 (5.2) | 2006 | 74 | 3(4.05) | 6(8.11) | 21(28.38) | 44(59.46) |
| | *p = 0.37 | 2007 | 74 | 0(0.00) | 6(8.11) | 18(24.32) | 50(67.57) |
| | 40 (5.3) | 2006 | 72 | 5(6.94) | 20(27.78) | 34(47.22) | 13(18.06) |
| | p = 0.30 | 2007 | 71 | 5(7.04) | 17(23.94) | 29(40.85) | 20(28.17) |
| | 41 (5.4) | 2006 | 72 | 9(12.50) | 26(36.11) | 25(34.72) | 12(16.67) |
| | p = 0.21 | 2007 | 70 | 8(11.43) | 19(27.14) | 26(37.14) | 17(24.29) |
| Category 6 Effective communi-cation skills<br><br>p=0.27 n/s | 42 (6.1) | 2006 | 75 | 1(1.33) | 14(18.67) | 46(61.33) | 14(18.67) |
| | *p = 0.56 | 2007 | 75 | 3(4.00) | 15(20.00) | 39(52.00) | 18(24.00) |
| | 43 (6.2) | 2006 | 54 | 7(12.96) | 20(37.04) | 19(35.19) | 8(14.81) |
| | p = 0.77 | 2007 | 56 | 9(16.07) | 18(32.14) | 17(30.36) | 12(21.43) |
| | 44 (6.3) | 2006 | 75 | 4(5.33) | 15(20.00) | 38(50.67) | 18(24.00) |
| | *p = 0.47 | 2007 | 76 | 1(1.32) | 15(19.74) | 36(47.37) | 24(31.58) |
| | 45 (6.4) | 2006 | 75 | 5(6.67) | 9(12.00) | 38(50.67) | 23(30.67) |
| | *p = 0.37 | 2007 | 74 | 2(2.70) | 13(17.57) | 31(41.89) | 28(37.84) |
| Category 7 Working with others in | 46 (7.1) | 2006 | 76 | 4(5.26) | 5(6.58) | 30(39.47) | 37(48.68) |
| | *p = 0.22 | 2007 | 76 | 0(0.00) | 5(6.58) | 27(35.53) | 44(57.89) |
| | 47 (7.2) | 2006 | 76 | 5(6.58) | 7(9.21) | 20(26.32) | 44(57.89) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a team | *p = 0.50 | 2007 | 76 | 2(2.63) | 5(6.58) | 26(34.21) | 43(56.58) |
| | 48 (7.3) | 2006 | 75 | 1(1.33) | 6(8.00) | 35(46.67) | 33(44.00) |
| **p=0.0453** | *p = 0.26 | 2007 | 76 | 1(1.32) | 5(6.58) | 25(32.89) | 45(59.21) |
| GEMP >Trad | 49 (7.4) | 2006 | 75 | 0(0.00) | 15(20.00) | 40(53.33) | 20(26.67) |
| | *p = 0.06 | 2007 | 76 | 1(1.32) | 11(14.47) | 30(39.47) | 34(44.74) |
| Category 8 | 50 (8.1) | 2006 | 74 | 8(10.81) | 20(27.03) | 34(45.95) | 12(16.22) |
| Self directed | p = 0.15 | 2007 | 73 | 10(13.70) | 27(36.99) | 27(36.99) | 9(12.33) |
| learning | 51 (8.2) | 2006 | 75 | 4(5.33) | 5(6.67) | 39(52.00) | 27(36.00) |
| | *p = 0.21 | 2007 | 76 | 1(1.32) | 8(10.53) | 31(40.79) | 36(47.37) |
| p=0.19 n/s | 52 (8.3) | 2006 | 76 | 1(1.32) | 3(3.95) | 33(43.42) | 39(51.32) |
| | *p = 0.47 | 2007 | 76 | 1(1.32) | 8(10.53) | 32(42.11) | 35(46.05) |
| | 53 (8.4) | 2006 | 58 | 15(25.86) | 22(37.93) | 17(29.31) | 4(6.90) |
| | *p = 0.38 | 2007 | 55 | 20(36.36) | 23(41.82) | 10(18.18) | 2(3.64) |
| Category 9 | 54 (9.1) | 2006 | 76 | 7(9.21) | 7(9.21) | 32(42.11) | 30(39.47) |
| Confidence | *p = 0.20 | 2007 | 75 | 2(2.67) | 13(17.33) | 29(38.67) | 31(41.33) |
| and personal | 55 (9.2) | 2006 | 76 | 6(7.89) | 8(10.53) | 25(32.89) | 37(48.68) |
| attributes | *p = 0.24 | 2007 | 74 | 1(1.35) | 8(10.81) | 31(41.89) | 34(45.95) |
| (intangible | 56 (9.3) | 2006 | 61 | 6(9.84) | 8(13.11) | 22(36.07) | 25(40.98) |
| personal | p = 0.70 | 2007 | 59 | 4(6.78) | 10(16.95) | 24(40.68) | 21(35.59) |
| resources) | 57 (9.4) | 2006 | 73 | 8(10.96) | 14(19.18) | 34(46.58) | 17(23.29) |
| **p=0.0446** | p = 0.78 | 2007 | 73 | 5(6.85) | 19(26.03) | 34(46.58) | 15(20.55) |
| inconclusive | | | | | | | |

Note: * = Fisher's Exact
# = significant, but 61% of data are missing

**APPENDIX C3**

Table C3 Full table of colleagues' questionnaire scores

| Category | Item (prob =) | Year | n= | Less well prepared no (%) | Well prepared no (%) | Fully prepared no (%) |
|---|---|---|---|---|---|---|
| Category 3 Holistic patient management and skills | 18 | 2006 | 59 | 11 (18.64) | 18 (30.51) | 30 (50.85) |
| | p=0.43 | 2007 | 70 | 10 (14.29) | 20 (28.57) | 40 (57.14) |
| | 21 | 2006 | 71 | 7(9.86) | 19(26.76) | 45(63.38) |
| | p=0.09 | 2007 | 73 | 5(6.85) | 12(16.44) | 56(76.71) |
| | 28 | 2006 | 62 | 11(17.74) | 30(48.39) | 21(33.87) |
| p=0.28 n/s | p=0.50 | 2007 | 67 | 12(17.91) | 27(40.30) | 28(41.79) |
| | 30 | 2006 | 67 | 10(14.93) | 28(41.79) | 29(43.28) |
| | p=0.65 | 2007 | 69 | 11(15.94) | 31(44.93) | 27(50.74) |
| | 32 | 2006 | 55 | 6(10.91) | 29(52.73) | 20(36.36) |
| | p=0.76 | 2007 | 57 | 4(7.02) | 32(56.14) | 21(36.84) |
| | 33 | 2006 | 62 | 10(16.13) | 19(30.65) | 33(53.23) |
| | p=0.60 | 2007 | 59 | 8(13.56) | 17(28.81) | 34(57.63) |
| Category 5 Professional values and attitudes (ethics) | 38 | 2006 | 69 | 3(4.35) | 23(33.33) | 43(62.32) |
| | *p=0.56 | 2007 | 71 | 2(2.82) | 18(25.35) | 51(71.83) |
| | 39 | 2006 | 72 | 2(2.78) | 11(15.28) | 59(81.94) |
| | *p=0.54 | 2007 | 74 | 1(1.35) | 8(10.81) | 65(87.84) |
| | 40 | 2006 | 62 | 5(8.06) | 29(46.77) | 28(45.16) |
| | p=0.42 | 2007 | 64 | 5(7.81) | 25(39.06) | 34(53.13) |
| p=0.16 n/s | 41 | 2006 | 66 | 12(18.18) | 23(34.85) | 31(46.97) |
| | p=0.26 | 2007 | 71 | 8(11.27) | 24(33.80) | 39(54.93) |
| Category 6 Effective communication skills | 42 | 2006 | 70 | 3(4.29) | 21(30.00) | 46(65.71) |
| | *p=1.00 | 2007 | 71 | 4(5.63) | 20(28.17) | 47(66.20) |
| | 43 | 2006 | 40 | 5(12.50) | 14(35.00) | 21(52.50) |
| | p=0.83 | 2007 | 46 | 5(10.87) | 16(34.78) | 25(54.35) |
| | 44 | 2006 | 72 | 4(5.56) | 18(25.00) | 50(69.44) |
| p=0.76 n/s | *p=0.67 | 2007 | 71 | 3(4.23) | 23(32.39) | 45(63.38) |
| | 45 | 2006 | 66 | 4(6.06) | 22(33.33) | 40(60.61) |
| | *p=0.42 | 2007 | 67 | 1(1.49) | 22(32.84) | 44(65.67) |
| Category 7 Working with others in a team | 46 | 2006 | 71 | 5(7.04) | 7(9.86) | 59(83.10) |
| | ***p=0.04** | 2007 | 74 | 1(1.35) | 17(22.97) | 56(75.86) |
| | 47 | 2006 | 70 | 6(8.57) | 13(18.57) | 51(72.86) |
| | p=0.95 | 2007 | 72 | 6(8.33) | 14(19.44) | 52(72.22) |
| | 48 | 2006 | 59 | 3(5.08) | 27(45.76) | 29(49.15) |
| p=0.55 n/s | p=0.88 | 2007 | 61 | 7(11.48) | 21(34.43) | 33(54.10) |
| | 49 | 2006 | 68 | 9(13.24) | 19(27.94) | 40(58.82) |
| | p=0.66 | 2007 | 71 | 6(8.45) | 28(39.44) | 37(52.11) |
| Category 9 Confidence and personal attributes (intangible personal resources) | 54 | 2006 | 70 | 4(5.71) | 15(21.43) | 51(72.86) |
| | *p=0.96 | 2007 | 72 | 3(4.17) | 16(22.22) | 53(73.61) |
| | 55 | 2006 | 71 | 8(11.27) | 21(29.58) | 42(59.15) |
| | p=0.31 | 2007 | 74 | 9(12.16) | 14(18.92) | 51(68.97) |
| | 56 | 2006 | 49 | 6(12.24) | 12(24.49) | 31(63.27) |
| | p=0.40 | 2007 | 53 | 8(15.09) | 16(30.19) | 29(54.72) |
| | 57 | 2006 | 64 | 17(26.56) | 24(37.50) | 23(35.94) |
| p=0.52 n/s | p=0.12 | 2007 | 61 | 10(16.39) | 22(36.07) | 29(47.54) |

Note: * = Fisher's Exact

Table C4: Full table of patients' allocated interview scores

| 2006 | | 2007 | |
|---|---|---|---|
| **Patient Code** | **Score** | **Patient Code** | **Score** |
| Pt-RC 183 | 5 | Pt-RC 200 | 4 |
| Pt-RC 002 | | Pt-RC 065 | |
| Pt-RC 131 | 3 | Pt-RC 109 | 3 |
| Pt-RC 111 | | Pt-RC 121 | 3 |
| Pt-RC 149 | 5 | Pt-RC 064 | |
| Pt-RC 105 | | Pt-RC 094 | |
| Pt-RC 011 | 4 | Pt-RC 021 | |
| Pt-RC 022 | | Pt-RC 041 | |
| Pt-RC 043 | 2 | Pt-RC 034 | 5 |
| Pt-RC 049 | 3 | Pt-RC 082 | |
| Pt-RC 075 | 3 | Pt-RC 019 | 3 |
| Pt-RC 082 | 4 | Pt-RC 072 | 5 |
| Pt-RC 172 | 3 | Pt-RC 076 | 5 |
| Pt-RC 100 | 4 | Pt-RC 040 | 5 |
| Pt-RC 117 | 3 | Pt-RC 144 | 4 |
| Pt-RC 119 | | Pt-RC 100 | 3 |
| Pt-RC 184 | 5 | Pt-RC 020 | |
| Pt-RC 210 | 3 | Pt-RC 007 | |
| Pt-RC 245 | | Pt-RC 106 | 3 |
| Pt-RC 038 | 3 | Pt-RC 087 | |
| Pt-RC 081 | | Pt-RC 002 | 3 |
| Pt-RC 186 | 5 | Pt-RC 003 | 5 |
| Pt-RC 033 | 4 | Pt-RC 006 | 5 |
| Pt-RC 116 | 4 | Pt-RC 026 | 5 |
| Pt-RC 213 | 5 | Pt-RC 058 | 5 |
| Pt-RC 225 | 4 | Pt-RC 032 | |
| Pt-RC 127 | 4 | Pt-RC 096 | 3 |
| Pt-RC 150 | 5 | Pt-RC 173 | 4 |
| Pt-RC 132 | 4 | Pt-RC 089 | 4 |
| Pt-RC 151 | 5 | Pt-RC 079 | 4 |
| Pt-RC 019 | 5 | Pt-RC 147 | 4 |
| Pt-RC 051 | 4 | Pt-RC 148 | |
| Pt-RC 053 | 5 | Pt-RC 158 | |
| Pt-RC 170 | 3 | Pt-RC 056 | 5 |
| Pt-RC 248 | | Pt-RC 120 | |
| Pt-RC 061 | 5 | Pt-RC 123 | 5 |
| Pt-RC 008 | 5 | Pt-RC 038 | 3 |
| Pt-RC 195 | | Pt-RC 114 | |
| Pt-RC 223 | 4 | Pt-RC 097 | 5 |
| Pt-RC 244 | 3 | Pt-RC 153 | 3 |
| Pt-RC 102 | | Pt-RC 138 | 5 |
| Pt-RC 106 | | Pt-RC 107 | 5 |
| Pt-RC 249 | | Pt-RC 016 | |

| 2006 | | 2007 | |
|---|---|---|---|
| **Patient Code** | **Score** | **Patient Code** | **Score** |
| Pt-RC 058 | 5 | Pt-RC 075 | |
| Pt-RC 251 | | Pt-RC 131 | 5 |
| Pt-RC 013 | 4 | Pt-RC 071 | 4 |
| Pt-RC 052 | | Pt-RC 105 | |
| Pt-RC 072 | | Pt-RC 047 | 5 |
| Pt-RC 155 | | Pt-RC 049 | 4 |
| Pt-RC 159 | 5 | Pt-RC 119 | |
| Pt-RC 077 | | Pt-RC 118 | |
| Pt-RC 146 | 5 | Pt-RC 093 | |
| Pt-RC 157 | 5 | Pt-RC 099 | |
| Pt-RC 007 | | Pt-RC 091 | |
| Pt-RC 066 | 4 | Pt-RC 103 | |
| Pt-RC 130 | 5 | Pt-RC 125 | 4 |
| Pt-RC 062 | 4 | Pt-RC 053 | 3 |
| Pt-RC 220 | | Pt-RC 090 | |
| Pt-RC 175 | 3 | Pt-RC 113 | 4 |
| Pt-RC 143 | 5 | Pt-RC 045 | |
| Pt-RC 006 | 2 | Pt-RC 078 | |
| Pt-RC 152 | 4 | Pt-RC 061 | |
| Pt-RC 118 | | Pt-RC 184 | 4 |
| Pt-RC 115 | 3 | Pt-RC 122 | 5 |
| Pt-RC 124 | | Pt-RC 088 | |
| Pt-RC 060 | 5 | Pt-RC 005 | 5 |
| Pt-RC 037 | 2 | Pt-RC 092 | 4 |
| Pt-RC 224 | 5 | Pt-RC 037 | |
| Pt-RC 045 | 4 | Pt-RC 057 | 4 |
| Pt-RC 252 | 5 | Pt-RC 111 | 4 |
| Pt-RC 010 | | Pt-RC 070 | |
| Pt-RC 147 | 5 | Pt-RC 085 | 4 |
| Pt-RC 154 | 4 | Pt-RC 052 | 3 |
| Pt-RC 067 | | Pt-RC 036 | |
| Pt-RC 247 | 4 | Pt-RC 083 | |
| Pt-RC 166 | 4 | Pt-RC 133 | 4 |