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The ethics of increasing medical student numbers in a resource constrained setting

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THE ETHICS OF INCREASING MEDICAL STUDENT NUMBERS IN A RESOURCE CONSTRAINED SETTING.

COLIN NIGEL MENEZES

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa, in partial fulfilment of the requirements for the degree of Master of Science in Medicine in Bioethics and Health Law

Supervisor:

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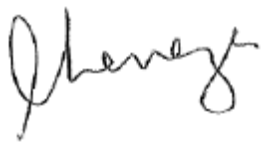
Faculty of Health Sciences, University of Witwatersrand.

DECLARATION

I declare that this research report is my own work except where I have stated otherwise.

It is being submitted in partial fulfilment of the requirements for the degree of Master of Science in Medicine in Bioethics and Health Law to the University of the Witwatersrand, Johannesburg.

This work has not been submitted before for any degree or examination at any other University.



11 October 2019

……

Colin Nigel Menezes

DEDICATION

This work is dedicated to my parents, Jose Francisco da Piedade Menezes and Maria Hazel de Quadros Menezes for always been there for me .

ABSTRACT

Background:

There is an urgent need to increase the number of doctors in South Africa. This study provides a local context where it specifically examines the ethical implications of patients' rights being affected in medical education in a South African setting and sets out to provide empirical evidence for optimum student to patient ratios to substantiate solutions for this dilemma.

Methods:

Empirical studies contribute to the field of ethics and therefore, this study includes both a normative and a descriptive component. For the empirical study, 118 patients were interviewed and 120 students were invited to complete a self-administered questionnaire. These participants were approached from four Departments - Surgery, Internal Medicine, Obstetrics & Gynaecology and Paediatrics in an academic teaching hospital in Johannesburg.

Results:

The Constitution, National Health Act (NHA) and Patients' Rights Charter advocate for access to healthcare. The State's ethical obligations conflict with its utilitarian policy attempts that allow for medical education to achieve healthcare at the cost of violating patients' rights and accepts that certain actions are imperative to achieve a better healthcare system, in line with the spirit of Ubuntu. On the other hand, Principlism and Kantism, together with the Constitution and NHA focus on maintaining patients' autonomy, right to

privacy and dignity, informed consent and confidentiality whether they accept or refuse healthcare choices. The roles of students are not formally discussed in these documents.
The empirical aspect of the study revealed that a third of patients were unaware that they were admitted to a teaching hospital and half of them were unaware of their right to refuse interaction with students. The majority of patients and students preferred smaller groups of no more than eight students per tutorial. Most patients wanted supervision during an encounter. The majority of patients said they never refused consent to students, while a third of students said at least up to three patients refused consent to be examined by them. The common reason cited by students for refusal of consent by patients was the exposure to excessive numbers of students and healthcare professionals.

Conclusion:

Patients need to be educated on their role in medical education. Institutions need to take cognisance of numbers of students that patients can tolerate. This highlights the urgent need for guidelines on the student-patient interaction including student to patient ratios by the Health Professions Council of South Africa (HPCSA) and medical schools.

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LIST OF ABBREVIATIONS

AIDS - Acquired immunodefiency syndrome.

BRICS - Brazil, Russia, India, China and South Africa.

CEO - Chief Executive Officer.

GEMP - Graduate entry medical students.

GMC - General Medical Council.

HIV - Human immunodeficiency virus.

HPCSA - Health Professions Council of South Africa.

IQRs - Interquartile ranges.

MCNZ - Medical Council of New Zealand.

MSC - Medical Schools Council.

N – Number

NHA - National Health Act.

NHI - National Health Insurance.

SD – Standard deviation.

TB - Tuberculosis.

UK - United Kingdom.

WHO - World Health Organization.

CHAPTER 1

1. OVERVIEW OF THE STUDY

1.1. Introduction

There is a critical need to increase the number of medical students across the national teaching platform because of the shortage of doctors in South Africa. This is against the backdrop of limited resources and the possibility that patients' rights might be encroached upon with the large number of medical students. This study looks at the latter issue where it specifically examines the ethical implications of how patients' rights might be affected in a South African setting and sets out to provide empirical evidence to substantiate solutions for this dilemma.

This first chapter provides a background and the rationale for this study. It explains the research aim and objectives. It also includes the research design and framework of the study.

1.2. Background

Against the back-drop of the human immunodeficiency virus (HIV)/acquired immunodeficiency syndrome (AIDS) and tuberculosis (TB) epidemic, and the increasing trend in non-communicable diseases, there is an urgent need for more doctors in South Africa. One of the essential components of a functioning healthcare system is the access to a health workforce.(1)

According to the World Health Organization (WHO) in 2019, the average global density of medical doctors was 15.4 doctors per 10 000 population with only 2.8 doctors per 10 000 population in Africa. There were only 9.1 doctors for 10,000 population in South Africa. South Africa, like India had a significantly lower number when compared to other countries

in the BRICS group – Brazil, Russia, India, China and South Africa. Russia had 40.1 doctors for 10,000 population whilst Brazil had 21.5 doctors for 10,000 population.(2)

Currently, there are only eight medical schools in South Africa. They are responsible for producing the 1200 to 1300 medical doctors each year. A ninth medical school was established recently and is expected to produce graduates in 2022.(3) This is inadequate for South Africa's needs.

There is pressure on these medical schools to increase their student numbers and this is on the background of a lack of resources. This includes a lack of teaching staff, tutors overloaded with clinical work because of the increasing numbers of patients, the lack of equipment and infrastructure. One of the possible solutions to these limitations would include extending the training platform but this would still require the students to interact with patients.

Bedside teaching is an essential component for training of doctors, where medical students are taught the essentials in history taking and the art of clinical examination, and more importantly on how to interact with patients in a professional and ethical manner. This interaction requires consent from patients especially when it comes to intimate interactions. It is often taken for granted that patients have a responsibility to take part in training of doctors and the perception is that the majority of patients agree to be involved in student teaching.(4,5)

However studies have shown acceptability rates to a physical examination to range from 40 - 84% only.(6–8)

With the increase in student numbers, clinical groups are likely to get larger and students to patient ratios are likely to increase. There is concern that patients are now beginning to refuse examination or have procedures done by students.

After an extensive search, only two studies were found globally that discuss the number of patient to student ratios in an in-patient setting. A study from Syria found that whilst 28% of patients would allow for more than nine students to be present at a bedside consultation, only 3.3% patients were happy to have more than six students to examine them. This study was conducted in Damascus.(8) In another study from Sudan, only 4.2% preferred eight or more students at a bedside consultation, but only 1.3% patients would allow more than six students to examine them.(9)

Part of the responsibility of the Health Professions Council of South Africa (HPCSA) is the accreditation of teaching hospitals and the training programs of medical schools (10); however there are no guidelines with regards to patient to student interaction nor the number of patient to student ratios. The South African National Department of Health and public sector training hospitals do not have any guidelines or documents on definition of a teaching institution except for the term "Academic" in their hospital's name. This may be a problem should a patient not know what this means especially if there is a language barrier.

One could argue that patients have an obligation to partake in teaching of medical students especially if they have benefited from the care provided by medical doctors who have learnt from other patients but the counter argument would be that patients' have a right to autonomy.(4,5) At question though is whether they understand their rights. According to the Bill of Rights in the South African Constitution,(11) the National Health Act (12) and the Patients' Rights Charter,(13) one has a right to privacy and a right to dignity; and informed consent and maintenance of confidentiality are essential.(14) Therefore, the concern that arises is whether it is ethical that student numbers be increased in a resource constrained setting to a level where patients' rights will be infringed with resultant harms.

1.3. Rationale for the Study

There is an urgent need for more doctors. There has been a call for medical schools to increase student numbers but on the background of limited resources.(15) In parallel, there is an urgent need to obtain an optimum student: patient ratio which is backed by empirical evidence and which takes into consideration patients' rights in a resource constrained environment. To my knowledge there are no studies that have looked at this from a South African perspective. This is the first study that explores the ethical implications of this scenario in a South African setting and provides empirical evidence to substantiate recommendations.

1.4. Theoretical Framework

Whilst we have an ethical obligation to train more medical students, one must take also take cognizance of resource constraints and the likely infringement on patients' rights.

I argue that there is a desperate need for more doctors in South Africa and the lack of resources will always be a potential concern in all spheres but should not be used as an excuse to limit the training of more doctors.

I argue that we have both ethical and moral obligations to our desperate patients who require health care. The potential harms of erosion of patients' rights are less threatening than the lack of appropriate medical care that face future generations should adequate numbers of doctors not be trained. I show that both the normative and empiric components of this study demonstrate that patients agree to student interactions but within limits and confirm the need for professional guidelines on patient-student interaction and a patient information form on issues such as what a teaching hospital is, what a clinical encounter with medical students would include and the importance of training of medical students.

1.5. Research Aim and Objectives

1.5.1. Research Aim

To critically assess the ethical implications of training increasing numbers of medical students to the level at which patients' rights could be infringed in a resource constrained setting.

1.5.2. Objectives

1. To critically assess the ethical relevance of training more doctors, particularly in a resource constrained environment.
2. To critically assess the rights of patients in the setting of a training hospital particularly in a resource constrained environment.
3. To determine the perception of patients and medical students towards each other in a resource constrained clinical environment.
4. To determine the possible number of students that should be allowed to interact with a patient in a resource constrained clinical environment.
5. To express and defend a thesis that a set number of students can be trained within in a resource constrained clinical environment.

1.6. Research Design

Empirical studies contribute to the field of ethics and therefore, this study includes both a normative and a descriptive component. The normative aspect of this project looks at *what ought to done?* This component of the project critically assesses the need for training more doctors and the rights of patients in the setting of a training hospital particularly in a resource constrained environment. The descriptive component of the project is empirical and looks at

what the facts are that are relevant to this normative enquiry, that is, how one should act in this particular situation of normative concern. This component looks at the perceptions of patient-student interactions in resource constrained settings.(16)

The reason for this is based on Kant's moral principle where "*ought to implies can*". Therefore, whilst the normative argument may imply what one *ought* to do, the empirical study substantiates this claim that one can *do* it.(16)

The normative project does not involve study participants and includes desktop research from internet sources that include PubMed, Google Scholar and Jstor. The empirical component is a quantitative project. This includes a descriptive cross sectional study using questionnaire on both patients and undergraduate students.

1.7. Research Methods for the Empirical Study

1.7.1. Population and Sampling

A random sample of patients was selected from Chris Hani Baragwanath Academic Hospital, one of the teaching hospitals attached to the University of the Witwatersrand. The reason for this hospital choice was that it included a representative population of patients across the three central teaching hospitals and the fact that they had a walk-in service as well.

The participants in the study included patients aged >18 years who were admitted to Departments of Internal Medicine, Surgery and Obstetrics and Gynaecology, and care–givers in Paediatrics.

The sample size for the empirical component of the study was calculated using the formula: $n=Z^2P\ (1-P)/e^2$, where Z=1.28, e=margin of error at 80% degree of confidence set at 5%. P = 80% based on prevalence of perception of patients agreeing to be seen by student.(7) When adjusted for non-compliance of 10%, the final sample size of patients was approximately 120

participants. A matched random sample of sample size of a 120 graduate entry medical students (GEMP) 3 and 4 students rotating through the same departments were also invited to participate in the study.

1.7.2. Data Collection and Analysis

Data was collected using a questionnaire adapted and modified to suit our local situation, from similar studies conducted in Syria and Nigeria.(7,8) The questionnaire to the patients was administered by the researcher or his study assistant (see appendices 3-6) and involved a formal informed consent process (see appendix 7).

The questionnaire was self-administered for the student arm of the research (see appendices 8-11). They received an information leaflet which contained all material information with regards to the research project (see appendix 12). Consent was tacit for the students. Data collected was entered into an Excel sheet. Categorical data of responses is presented as percentages and comparisons between two groups were done using the Chi-square test. Continuous data is presented as means ±standard deviation or medians and interquartile ranges (IQRs). Comparisons between groups was made by using the student's t-test. The p value is set at <0.05 at a confidence interval of 95% for statistical significance. Data was analysed using the StataCorp® software package (College Station, TX: StataCorp LLC).

1.8. Argumentative Strategy for the Normative Study

The moral theory of utilitarianism was used for the argument for increasing the number of students and this was supplemented with the emerging philosophy of Ubuntu.

Principlism, a commonly used ethical framework in healthcare and the moral theory of deontology were used for the counter arguments.

Using utilitarianism, I argued that it was necessary for medical schools in resource constrained settings to increase the number of students. This was in spite of the increased student to patient ratio numbers and possible harms to the patient - as it would benefit society in the long run as there was a need for more doctors.

I also drew on upon the philosophy of Ubuntu and justified that a patient is treated by a doctor today because of other patients allowing themselves to use as learning material in the training of that doctor.

My counter argument was drawn from Principlism and the deontological moral theory - where I argued that Kant's categorical imperative would suggest that using a patient as learning material is not ethically and morally justifiable as this would be tantamount to using a patient as a means to an ends.

1.9. Reliability and Validity for the Empirical Study

Patient and student questionnaires were developed based on already tested questions in other studies in terms of content. In addition, in order to try and maintain consistency, both questionnaires were piloted first on 20 participants - five participants from four departments, of which two were students and three were patients. In addition, the questionnaires used, had close ended questions, allowing for their use in future studies.

1.10. Ethics and Approvals

An application was made to the Human Research Ethics Committee for approval of both components of the project – for an ethics waiver for the normative component and clearance for the empirical component (approval number M1704106 – see appendix 13).

Permission was also obtained from the Assistant Dean of Teaching and Student Support as part of the study required interaction with students (see appendix 14).

For the empirical component of the project, written permission was obtained from the Heads of Departments of Internal Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology and the office of the Chief Executive Officer (CEO) of Chris Hani Baragwanath Academic Hospital (see appendices 15-19).

All participants were aged 18 years and above. They were invited to participate in the empirical arm of the study and were allocated a unique identification number to maintain anonymity and confidentiality. By completing the questionnaire, student participants gave tacit consent to partake in this study in lieu of signing a consent form. However, in this situation, as the students were considered to be vulnerable and to prevent them from feeling coerced into participating in this study, an administrator from the respective departments made the questionnaires available to them. The researcher or his study assistant administered the questionnaire to the patient group and written informed consent was obtained from them.

1.11. Funding

Only limited funding was required for paper and printing. Research incentive funds were utilized for this project.

1.12. Limitations of the Empirical Study

The main limitation of this study was that only closed end questions were utilized in the questionnaires. This did not allow for the participants to give their own reflections of the situation. In addition, a perspective from the clinical tutors involved in the training of the medical students would have provided more insight to this issue.

1.13. Overview of the chapters

Chapter 1 is an overview of the study. This chapter provides a background and rationale for the study and explains the research aim and objectives. It also includes the research design and framework of the study.

Chapter 2 is the normative component of the study. This chapter presents an ethical and legal argument for the need for training more doctors and the rights of patients in the setting of a training hospital particularly in a resource constrained environment.

Chapter 3 is the empirical component of the study. It looks at the perceptions of patient-student interactions in a South African hospital setting and discusses the patient-student numbers.

Chapter 4 – in this chapter, the relationship between the normative component of the study – the “ought” and the empirical component – the “can” are discussed.

Chapter 5 provides conclusions and recommendations with specific suggestions for improving patient-student interactions in the setting of the increasing student numbers.

CHAPTER 2

2. THE ETHICO-REGULATORY PERSPECTIVE

2.1. Introduction

This chapter discusses the first two objectives. It focuses on the normative aspects of the study which is to critically assess the ethical relevance of training more doctors, and the rights of patients in the setting of a training hospital particularly in a resource constrained environment. On the one hand, it is argued that there are both ethical and legal obligations for increasing the number of medical students that are trained to allow for access to doctors for desperate patients requiring healthcare. In addition, it is claimed that the lack of resources will always be a potential concern in all spheres but this should not be used to justify limiting the training of much needed doctors. The right to access basic health care is enshrined in section 27 of South African Constitution and therefore, a system needs to be put in place to allow for both quality healthcare coupled with contributing to the training of more doctors. This will possibly improve health care services as a result. However, on the other hand, it is argued that there are both ethical and legal obligations to protect the rights of patients. The presence of more students in the hospital setting is likely to erode their rights. There is an urgent need for local South African professional guidelines on patient-student interaction and a patient information brochure or leaflet on issues such as what a teaching hospital is, what a clinical encounter with medical students would include and the importance of training of medical students.

The first part of this chapter discusses the need for training more doctors from an ethic-regulatory perspective.

2.2. The Need for Training more Doctors

To contextualize the importance of the problem, South Africa faces a massive burden of communicable diseases such as HIV/AIDS and TB, maternal and child mortality, non-communicable diseases such as hypertension and cardiovascular diseases, diabetes, cancer, mental illnesses as well as injury and trauma. According to the Statistics South Africa Report released last year, South Africa has been characterised by declining rates of mortality, but there are still high prevalence rates of communicable diseases and worryingly, a growing threat of non-communicable diseases. Non-communicable diseases accounted for 57.4% of deaths while communicable diseases resulted in 31.3% of deaths in 2016. TB was listed as the leading cause of death, with diabetes mellitus following suit. Other main causes of death included various forms of heart disease, cerebrovascular diseases and HIV related diseases. HIV/AIDS plays a disproportionally large role and contributes to the increasing cases of TB, diarrhoea, meningitis and other opportunistic infections. (17)

This highlights a dire need for appropriate public health services and interventions, including an urgent need for more doctors. The recent WHO Statistics Report (2019) showed that over 30% of its member countries have under 10 medical doctors per 10 000 population. This is worrying as over 22% of the overall burden of disease is present in Africa which has access to only 3% of all health professionals and less than 1% of the global financial resources. (2)

The healthcare workforce is the backbone of the country's healthcare system. The issue of staff shortages was highlighted by a recent Lancet National Commission on high quality health systems in South Africa - which was commissioned to look into the state of quality of healthcare in South Africa.(18) The shortage of doctors in South Africa is rooted from an academic environment that is unable to provide the required number of medical doctors

because of the lack of resources. This includes a lack of teaching staff, doctors responsible for training the medical students have also been overloaded with clinical work because of the increasing numbers of patients, the lack of equipment and proper infrastructure. The lack of resources will always be a potential concern in all spheres of Government but should not be used as a reason to limit the training of more doctors. In fact, the medical students themselves could be looked up as an actual untapped resource in the healthcare workforce. For the purposes of this study, my research focuses only on the issue of the need for training more doctors in a resource constrained environment.

In an Econex report for the Hospital Association of South Africa in 2016 (1), there were several reasons given for why South Africa has a shortage of doctors. These included the emigration of medical doctors to other countries (1,19) and the lack of training capacity by the local medical schools in the country (1). The restriction on employing foreign trained doctors who wanted to come and work in South Africa was also highlighted. South Africa has a strict national policy of recruiting foreign trained doctors through country to country arrangements (1,20). In addition, the Health Professions Council of South Africa also has stringent registration regulations like other national medical councils.(20)

A recent solution to these limitations was that of extending the training platform to involve secondary hospitals.(1) However, this would also require the students to interact with patients.

Training of medical doctors requires the involvement of patients – an essential component of medical education is doctor-patient interaction where the diseases processes and their management are taught. As clinical groups are larger and students to patient ratio increase, the concern is that patients might refuse physical examination or procedures to be done by students.

It is against this backdrop of limited resources and concerns about patients' rights to basic healthcare that the system has to both provide quality healthcare and also contribute to the training of more doctors. This could allow for adequate functioning and possible improvement in the health care system.

The right to health care is enshrined in section 27 in South Africa's Constitution, and section 28 of the Constitution affirms every child's right to basic health care.(11) The State has a responsibility to make provisions for this to all people that live in the country. This includes basic essential health services that every person has a right to have, which includes access to medicines, vaccines and basic technologies. Access to healthcare workers is one of the ways in which this right can be realised. In order to meet this demand, the Government has been driving its policy to increase the number of doctors (20) especially because it wants its National Health Insurance (NHI) policy to be sustainable.(1) The State has legal, moral and ethical duties to look after its citizens, not only now but going forward in the future as well.

2.2.1. The Legal Framework in the Context of Producing more Doctors

It is the State's duty to safeguard and advance the interests of our society. This includes the delivery of health care. There are rules that govern the responsibilities of the South African government and together these rules are called a legal framework. In the context of healthcare, the legal framework that guides the State, includes the Bill of Rights in the Constitution of South Africa,(11) the National Health Act (NHA) (12) and the Patients' Rights Charter (13).

2.2.1.1. Constitution of the Republic of South Africa - the Bill of Rights

The Constitution of the Republic of South Africa (11) provides a framework for the rights and freedoms of its people. It is of crucial importance because it guarantees our basic human rights, one of which is access to healthcare. It is a legal requirement by the Government to provide adequate health services and this is entrenched in the Bill of Rights in Chapter 2.(11) It states that:

- in compliance with section 7(2) of the Constitution, the State *"must respect, protect, promote and fulfil the rights enshrined in the Bill of Rights"*;
- in terms of section 27(2) of the Constitution, the State *"must take reasonable legislative measures within its resources to achieve the progressive realisation of the right of the people of South Africa to have access to all health care services",*
- in terms of section 28(1)(c) of the Constitution, that *"every child has the right to basic health care services"*;

There are limitations to these rights and this is reflected in section 36, however, while it applies to section 27 (except for emergencies), it does not apply to children's rights to access basic health care as stipulated in section 28.

2.2.1.2. The National Health Act

The NHA Act 61 of 2003 clarifies what the State has to do in terms of providing healthcare.(12)

It spells out the legal requirements for which the State has a responsibility and these include:

- Section (1) (a) *"within the limits of its resources protect, promote, improve and maintain the health of its citizens";*

- Section (1) (b) *"within the limits of its resources promote the inclusion of health services";*
- Section (1) (c) *"within the limits of its resources endeavour determine the policies necessary to protect, promote, improve and maintain the health of its citizens";*
- Section (1) (d) *"within the limits of its resources ensure the provision of such essential health services";*
- Section (1) (e) *"within the limits of its resources endeavour to equitably prioritise the health services"*.
- Section (2) *"every level of department, be it national, provincial or municipality establish health services must equitably provide health services within the limits of its resources in the public sector"*.

2.2.1.3. The Patients' Rights Charter

The South African Department of Health went one step further and developed the Patients' Rights Charter.(13) This is a common standard that ensures the right to access to health care services as assured in the Constitution of the Republic of South Africa.(11). It focuses on patients' rights which include the following:

- *"The right to a healthy and safe environment"*.
- *"The right to participate in health policies and decision-making processes affecting one's health"*.
- *"The right to access health care services"*.
- *"The right to the details of one's medical aid insurance"*.
- *"The right to choose a particular health care service"*.

- *"The right to know the person that is treating them".*
- *"The right to confidentiality and privacy when concerning issues around one's health".*
- *"The right to informed consent in the provision of one's treatment".*
- *"The right to refuse treatment".*
- *"The right to a second opinion for their treatment choices".*
- *"The right to continuity of care at a health facility".*
- *"The right to lodge a complaint about health care services".*

It also lays out the responsibilities of the patient where it states that every patient has:

- *"To look after one's health".*
- *"To protect the environment".*
- *"To respect the rights of fellow patients and health professionals".*
- *"To use the health care system but not to abuse it".*
- *"To understand one's local health services and what they provide".*
- *"To provide one's health care professional with accurate information for their treatment".*

In one of its attempts to achieve their legal obligation to ensure all South Africans have access to universal health coverage which would include quality and affordable healthcare irrespective of their financial background, the NHI program was introduced.(21) It is a health financing system that the South African National Department of Health has rolled out since 2012. This would mean that patients could access health services closest to where they live or work and this would include both public and private services accredited by the Government. However, the doctor shortage is impacting this program as it requires a greater number of

healthcare workers with different skills and more so, doctors. Therefore, the training of more doctors has to be increased. As a response to the shortage of doctors in the South African healthcare system, the South African National Department of Health started sending more medical students to be trained in Cuba – however, the realisation of this project is no longer financially viable and sustainable in the long run and the pressure is now on the local medical schools to push their outputs within their constraints.(1)

2.2.2. The Ethical Framework in the Context of Producing more Doctors

Whilst we have a legal obligation to train more medical students in order to increase the number of doctors, one must take also take cognizance of resource constraints and the likely infringement on patients' rights. The lack of resources has been and will always be a potential concern in all spheres – it should not be used as an excuse to limit the training of more doctors. The concern for future generations can be addressed by the ability to influence current government policies thereby underscoring that appropriate medical care provided by the State is not only a legal obligation but an ethical and moral obligation as well.

In the section that follows, the ethical theory of utilitarianism is used to argue for increasing the number of students. The arguments are reinforced by the use of the emerging philosophy of Ubuntu.

2.2.2.1. Utilitarianism

The provision of healthcare is generally grounded in utilitarianism. It was formulated by Jeremy Bentham in the 18th century and John Stuart Mill in the 19th century and remains influential in modern moral philosophy. This ethical theory states that it is our moral

obligation to maximize benefits or good, for the greatest number of people regardless of competing individual needs. In this case, the benefit is utility - which is defined in terms of pleasure and suffering.(22)

The action in this approach, could sometimes conflict with other values, such as justice, fairness, and honesty but as long as the net outcome is maximum benefit, the outcome is ethically acceptable. This approach requires that everyone's interests be weighted the same which also makes it possible to sacrifice one small group of people over the interests of the greater good of the majority.(22) Therefore, the utilitarian argument favours furthering improved health care for patients and society in the long run, and outweighs the possible detriments on an individual patient participating in clinical teaching now.(4) Therefore, if a qualified doctor in a teaching hospital such as an intern, registrar or consultant undertakes a procedure on a patient, this benefits the individual patient only. However, when the medical student does the procedure, the medical student, the index patient and future patients all benefit – the student obtains the necessary skill to manage patients in the future whilst the index patient gets the much needed treatment. (4) Moreover, the system benefits as well because, part of the doctor's workload is shared with the medical student who thereby provides an added healthcare resource.

An argument against utilitarianism is that who decides what is good for whom? A utilitarian would not judge the rightness or the wrongness of the action but just the consequence of the action as long as it benefits the majority of people. Whilst the need to train more doctors is quite clear, what remains uncertain is the potential harms to the patients. Such harms could include the feeling of uneasiness from intrusive questioning about one's personal details, and discomfort from repeated physical examinations. Such experiences are difficult to

measure.(4) In similar manner, the risk from multiple invasive procedures cannot also be overlooked.

There are two types of utilitarianism - act utilitarianism and rule utilitarianism. According to act utilitarianism, our moral obligation is to pursue the action or policy that would maximize benefit in the context in which such an option is being considered. Whereas, according to rule utilitarianism, our moral obligation would be to pursue the option that complies with a rule that, in general, maximizes utility.(23)

Therefore, in act utilitarian each act is judged in terms of its consequences and the act is not generalised. Each student -patient encounter will be examined individually for the claim to be made that the benefit of the patient's participation in the training of medical students outweighs the value of the patient's right to refuse. As such, in every encounter, the patient would be morally obliged to participate, as this would bring about the greater good. On the other hand, a rule utilitarian would consider the consequences of following that rule prior to acting. In this case, how the patient's autonomy would be affected would require reflection. Therefore, the patient's right to choose if they want to participate in the training of doctors is of value, the obligation to participate is an obligatory act. However, the freedom to choose when to perform it and when to refuse is preserved.(4) Rule utilitarianism, hence, more appropriately supports the situation as it couples the utility of medical student training with patient choice.

2.2.2.2. Ubuntu

As a world view, Ubuntu is regarded as an indigenous philosophy and embraces both moral and cultural values. Many African languages have versions of the word "Ubuntu" in their

vernacular. This generally means a way of living and it means “a person is a person because of other people”.(24,25) Therefore the philosophy of Ubuntu appeals to a person to identify with another since “*I am because you are*”.

Caring, sharing, compassion and respect for others are key elements that characterise this philosophy. “*Caring is sharing*” is a commonly used phrase and implies that when we share something with someone else it is equal to caring for that person and having compassion for that person – in essence we have respect for the other person and want to help them.(24–26) Solidarity is another key element in Ubuntu that speaks towards a sense of mutual support towards each other. Therefore, as a consequence of this – “*our being*” would be a fulfilment of this synergistic coexistence, that each person is interconnected and interdependent on each other.(24–26)

In this context, this would suggest that the community is more important than an individual. Therefore because an individual would benefit from this membership of the larger community – the individual has accompanying obligations to it. Similarly, when applying the philosophy of Ubuntu to issues of participation in medical training of students, it would suggest that because we all benefit from a healthcare system, we should all be prepared to contribute to it.(5) Rather than the State, medical schools and training hospitals being solely responsible for the medical education system we, as the citizens of the country, should play our role because after all, we all benefit from it.

In a sense, Ubuntu suggests that a patient benefited from the services of a doctor today because their doctor trained on other patients in the past as learning material. In essence it advocates for the focus to be on the obligation to the wider society rather than on the *actual* concept of being involved in the training of medical students. (4,5)

The Bill of Rights in the South African Constitution is mainly rooted on the rights of individuals rather than that of communities.(11) Community rights are not explicitly addressed. Ubuntu on the other hand suggests the opposite – it is more inclusive and focuses on the rights of the community as a unit. In this way, one could argue that Ubuntu almost infringes on one's human rights because it encroaches on one's autonomy. However, Ubuntu does not merely seek to fulfil the needs of the majority, as in the case of utilitarianism - instead Ubuntu seeks to build consensus for the common good. It asks for everyone's participation and responsibility towards achieving a common goal – a better healthcare system in this case.

The second part of this chapter discusses the rights of patients from an ethico-regulatory perspective on the training of increasing numbers of medical students in the context of resource constraints.

2.3. The Rights of Patients

It is a well-known fact that patients are "used" for training of medical students. Students may "use" patients to apply their text book knowledge and this is might vary from observing a task to practically performing it on a patient.

With the move by the medical universities to produce more doctors, the number of actual medical students is also going to increase and this will result in much larger clinical groups. As a consequence, the student to patient ratio is expected to increase and the concern is that patients might begin to refuse to interact with these students especially if they are flooded

with large numbers of them requesting permission for access to a physical examination or have procedures done on them.

It is frequently taken for granted that patients have to participate in clinical teaching because they have benefited from the care of doctors.(4,5) The counterclaim is that patients' have a right to autonomy and self-determination, meaning that they have the right to make their own choices. The question though is whether they understand these rights. Studies over the years have shown that the rates of patients' understanding their rights are not as high as one would have anticipated.(6–8) Students must understand that the patient's right to refuse consent takes priority over the provision of their medical training. This tension is particularly acute currently as students interact in their large numbers with patients. (4)

In South Africa, the medical schools utilise public sector hospitals for training (1) and therefore patients who seek care at such facilities are used for this purpose. The HPCSA is responsible for the process of accreditation and validation of training programs of teaching hospitals and medical schools.(10) There is no specific code of conduct for medical students in South Africa, but because they are registered with HPCSA, by inference, all the policies and guidelines govern them as well. There is only one stipulation (section 3.1.3.9) in the HPCSA guidelines for good practice in the health care professions seeking patients' informed consent guidelines that states that patients' need to be provided with information "*Whether students will be involved, and the extent to which students may be involved in an investigation or treatment*". (27) Furthermore, there are no guidelines on the ethically permissible numbers of patient to student ratios. The South African National Department of Health and public sector training hospitals do not have any guidelines or document on definition of a teaching institution. Notably, the tertiary and quaternary hospitals include the term "Academic" in their name, however it is questionable as to whether the public understand what the term

means. The need for such a guideline is important especially if patients are going to experience not only more frequent encounters with medical students but also bigger clinical groups.

Some countries have national guidelines that pronounce on the student-patient interaction. The Medical Council of New Zealand (MCNZ) and some of its medical Universities have put together a consensus statement on medical students and informed consent.(28) The United Kingdom (UK) General Medical Council (GMC) and the Medical Schools Council (MSC) (29) and the Irish Medical Council (30) also have a regulation of students' conduct in terms of patient management. But there are none that give guidance on the actual acceptable number of students to patient ratios.

2.3.1. The Legal Framework in the Context of Patients' Rights.

There are several legal instruments that safeguard the rights of patients. These have been introduced in section 2.2.1 from the perspective of access to health care. The focus in the sections that follow are on autonomy-based rights.

2.3.1.1. The Constitution of the Republic of South Africa - the Bill of Rights

The fundamental requirement to respect patients and their rights is entrenched in the Constitution of the Republic of South Africa.(11) Many sections in the Bill of Rights in the Constitution affirm the importance of patients' autonomy in the setting of healthcare:

- Section 10: "*The right to inherent dignity where ones dignity is respected and protected.*"
- Section 12 (1) (c): "*The right to freedom and security, including the rights to be free from all form of violence.*"

- Section 12(1) (d): "*The right to freedom and security, including the right not to undergo any form of torture."*
- Section 12(2) (b): "*The right to bodily and psychological integrity, including control over their own body."*
- Section 12(2) (c): "*The right to bodily and psychological integrity, including not to be subjected to medical or other scientific experimentation without their informed consent."*
- Section 14: "*The right to privacy."*
- Section 27(1) (a): "*The right to access healthcare services and reproductive healthcare."*

2.3.1.2. The National Health Act

The NHA Act 61 of 2003 also stresses the following legal requirements related to patient care.(12)

It requires all health practitioners to adhere to these rules and these include:

- Section 6 (1) (a): "*Every health care provider must inform a user of their health status."*
- Section 6 (1) (b): "*Every health care provider must inform a user of the range of diagnostic procedures and treatment options generally available to the user."*
- Section 7 (2): "*A health care provider must take all reasonable steps to obtain the user's informed consent."*
- Section 8(1):"*A user has the right to participate in any decision affecting his or her personal health and treatment."*
- Section 14 (1): "*All information concerning a user, including information relating to his or her health status, treatment or stay in a health establishment, is confidential."*

2.3.1.3. The Patients' Rights Charter

As discussed in section 2.2.1.3, the Patients' Rights Charter emphasizes the rights of patients in the setting of their health seeking behaviour. These include the importance of participating in decisions related to one's health care, the right to confidentiality and privacy with regards to information concerning one's health, the importance of informed consent in the setting of treatments and the right to refuse treatment. (13)

Therefore, the right to health is reflected in at least three *sections* of the South African Constitution.(11) The State is legally required to take all reasonable measures to achieve the realisation of this right. It has already done so in terms of legislative measures by enacting the National Health Act and in terms of policy by promulgating the Patients' Rights Charter. It has an obligation to respect the right and to refrain from denying access to health care services to anyone.

2.3.2. The Ethical Framework in the Context of Patients' Rights

The training of medical students to become our future doctors is crucial to the continuance of medicine and the healthcare system. However, this involves patients and has the potential to impact their care and rights. Whilst there is an obligation to fulfil this need for more doctors, should it be placed solely on the shoulders of patients by creating a moral obligation for them to participate in this process without safeguarding their interests in parallel? (4)

2.3.2.1. Principlism

Principlism is a commonly used ethical framework in healthcare. This theory was developed by Beauchamp and Childress and emphasizes four key ethical principles: autonomy, beneficence, non-maleficence, and justice. Beauchamp's and Childress' autonomy (31) and non-maleficence (32) are two relevant principles related to patients and their rights that will be used for further analysis in this context.

2.3.2.1.1. Autonomy

Respect for autonomy refers to "self-rule" with no control from others. It requires that the patient has autonomy of thought, intention, and action when making choices. In order for a patient to make a fully informed decision, the patient must understand all risks and benefits of the procedure – and importantly must be free of coercion.(31)

The principle of respect for autonomy is usually associated with allowing patients to make their own decisions about their healthcare and involves informed consent. Informed consent usually is "expressed" in nature in the context of health care where procedures are involved. But often in the setting of a teaching hospital environment, it is assumed to be "presumed" consent merely because patients have presented themselves to the teaching hospital for health care. (31)

The process of obtaining consent is an ongoing process, and does not only involve communication but also building trust. Patients must be made to understand that they have the option to freely withdraw their consent at any time.(31) Students must respect the confidentiality of all information acquired by them in connection with patients. But the setting where the interaction between patients and students frequently occurs, is in a busy

environment, medical staff are under immense pressure and there is a rapid turnaround of patients, the reality of such situations is that to ask for consent and spend a lengthy period of time trying to obtain it is often limited. (13)

Obtaining informed consent from a patient is of vital important in the medical education setting as it is not directly related to their treatment. Patients have a moral and legal right to control the clinical encounter with medical students because it is a very intimate interaction - personal details are revealed and they are physically touched and then this information is communicated to others. (13)

Informed consent involves the following elements:

- Capacity or competency: The question is often whether a patient has the capacity or competency to make an informed choice. An example would include if a patient would understand the risk of allowing a novice to insert a central venous catheter rather an experienced clinician and make a decision on whether or not to have it.(31)

- Voluntariness is a critical component of consent. One must not be “influenced” into making a choice. Coercion alludes to the “use of force” to make a decision, while manipulation refers to the “exaggeration of facts” both commonly used in the clinical setting. When a pregnant patient is persuaded to make a decision to allow the student to perform a vaginal examination to assess how far dilated she is so that she receives the much needed pain killer. In the clinical setting, manipulation and coercion are often used.(31)

- Disclosure: One is obliged to disclose important facts about a procedure in order for one to make an informed choice. It is questionable as to whether it will be possible for

patients to decide on the information provided to them by the student and whether the information is reasonable enough to make the correct choice.(31)

- Understanding: Many patients tend to vary in their degree of understanding. This could be perhaps as a result of language barrier or even because of their illness. Some are attentive whilst others are easily distracted. “Medical jargon” or “information overload” may often prevent the patient from understanding the issue.(31)
- Authorization: The last component is critical and involves a person’s authorization to a procedure for example, which must adhere to legal requirements that are required of medical professionals to follow.(31)

However, this has the potential to affect their care as well as their rights. Even though a medical student examines a patient or performs a procedure under some supervision, this does not reduce the risk of the possible harm to the patient. A medical student generally requires repeated practice on several patients to gain the necessary experience, whether it be an intimate examination such as a rectal or vaginal examination, or a simple procedure such as insertion of an intravenous drip, or more complicated procedure such a bone marrow aspiration and trephine. Sometimes in the process of trying to improve their skills and confidence, they could unintentionally cause harm to the patient. The critical moral conflict is that of training of medical students, so that more doctors are produced, taking precedence over patient rights in terms of their autonomy to make choices. Much of this practical training can take place in skills laboratories.

2.3.2.1.2. Non-maleficence

There is no legal requirement for a patient to allow a student to practice on them. Similar to a clinician requiring consent from a patient, it is against the law for a person to touch another person without their consent as this could amount to harm or assault.

Non-maleficence refers to an obligation of not causing harm to others. It is often assumed that this principle is the same as that of beneficence. However, the obligation "not to cause harm" is not the same as an obligation "to help others" – preventing and removing harm, and promoting good.(32)

The obligation includes not only the action of "not to cause harm" but also "not to impose a risk of harm" on an individual which could be done without intent. In the case of a complicated procedure such as a pleural biopsy being performed by a student that requires practice to improve their clinical skills rather than an experienced clinician - the risk of a causing a pneumothorax is a possibility in this case but with regards to risk, one is compared to a "standard of due care", and judged to be responsible if accused of medical negligence. This "due care" is the appropriate care that a "reasonable" person would take to avoid harming another person. But the question at hand is – what would the patient's rights be in such a setting?(32)

2.3.2.2. Deontology

Deontology focuses on the rightness or wrongness of actions themselves. Immanuel Kant was one of the first philosophers to define the principles of this ethical theory. He focused on one's obligation to duty. According to him, it was the moral intent of the action itself that was

important and not the end result. He said that our duties are important and absolute, regardless of the outcome, and must be applied to everyone equally.(33)

Kant spoke about two types of duties. He called them the conditional and categorical imperatives. A conditional imperative is a duty that is necessary to accomplish a goal and is something that we do to achieve an end. However, a categorical imperative on the other hand, is an unconditional rule duty. This means that regardless of the end result of your action, the duty remains the same. In this way, the actual act is unrelated to the end result.(33)

Within the categorical imperative is the basic principle of morality: ‘‘Act only in accordance with that maxim through which you can at the same time will that it become a universal law’’, in that we should not use people to attain our desired end result and that we should treat everyone with respect regardless of the outcome of the action.(33)

Therefore, in the process of training more doctors, this would require medical students to “practice” procedures on patients to get the necessary expertise. This would seem to be treating patients as a means to an ends. At question is however, are these patients being used as a means only? The argument fails because, even if these patients get the procedure, they are not treated as an end as they receive the needed treatment in a way that potentially exposes them to risk of harm.(33)

2.4. Conclusion

One of the essential components of a functioning healthcare system in a resource constrained environment, is the access to qualified health workforce. The Constitution of the Republic of South Africa, NHA and the Patients’ Rights Charter all advocate for it. It is inevitable that the State’s ethical obligations could conflict with its attempts to decide on a suitable policy, especially in light of the utilitarian argument that allows for medical education to achieve

health care in the long run at the cost of potential harms to a patient. Nevertheless, the spirit of Ubuntu encourages us to recognize that as a society we require certain actions to achieve a better healthcare system for all and towards the common good.

On the other hand, Beauchamp's and Childress' Principlism and Kant's idea of treating patients, together with the core sections of the South African Constitution, NHA and policies focus on patients' autonomy, their right to privacy and dignity, and that informed consent and confidentiality must be maintained whether they accept or refuse healthcare choices. Healthcare practitioners are obligated to treat patients as such. The roles of medical students in healthcare provision are not formally discussed in these governance documents. As a general legal principle, one should be allowed to refuse to be treated by a medical student, as one may refuse to be treated by any other healthcare practitioner.

This underscores the urgent need to develop comprehensive professional guidelines for the local South African context on the student-patient interaction including student to patient ratios. This should include what is entailed in the training of medical students and what a patient should expect in a clinical encounter with medical students together with a patient information form on patient-student interaction and the need for informed consent.

CHAPTER 3

3. RESULTS OF THE EMPIRICAL STUDY

3.1. Introduction

The ethics of increasing student numbers in the context of resource constraints has been explored normatively from the ethico-legal perspective. It has been established from the ethical values and legal standards used in the analysis in the preceding chapter that increasing student numbers is justifiable; however this must be balanced with respecting patients' fundamental human rights and safeguarding patients against harms.

The research now changes its trajectory to descriptive ethical enquiry which explores realties on the ground in the empirical arm of the study.

This chapter starts off with discussing the pilot study. Results of the empirical component are then presented. It deals with the second two objectives of the study where it considers the perceptions of patient-student interactions and establishes from students and patients, the possible number of students that should be allowed to interact with a patient in a clinical environment in a South African hospital setting. For detail on the methods employed, see chapter 1, sections 1.7.1 and 1.7.2.

A pilot study was undertaken initially to test the feasibility of the study. This included testing the appropriateness of the sites for recruitment of patients and students, the understandability of the participant information sheets and the approximate time required to complete the self-administered questionnaires, interviews and the consent process.

3.2. The Pilot Study

3.2.1. Results of the Pilot Study

A total of 20 participants were selected for the pilot study. Four specialties were included in the study. These were the Departments of Internal Medicine, Surgery, Obstetrics and Gynaecology, and Paediatrics. There were five participants per department, of which two were students and three were patients. All participants were randomly approached from each of the departments.

The background demographics were as follows: the overall age of the 12 patients was 36 ±11.7 years (mean ± SD). The overall age of the students was 24 ± 2.1 years (mean ± SD). There were more female participants in the pilot study, of which eight were female patients, and three female students. There were four male patients and five male students. A third of the patients had received secondary education. Six of the students were GEMP 4 and two were GEMP 3 students For detail on the results of the pilot study see appendix 21.

3.2.2. Outcomes of the Pilot Study

1. The participant information and informed consent form were adequate and no changes were required.
2. On interviewing the participants, it became clear that the term “interaction” with a patient or student was not clear and the preferred term suggested was “encounter”.
3. An additional question was added to the patient’s questionnaire: *How many encounters in which students examine you would you be comfortable with in one day?*
4. An additional question was added to the patient’s questionnaire: *How many students would you prefer to examine you during the encounter?*

5. How many students do you think should be allowed to examine patient during one encounter?
6. The following question was changed in both the patient's and student's questionnaire to read from: *"Do you feel this interaction must be in the presence of the student supervisor? Yes/No. If yes, at what stage of your interaction with a student do you think a student should have supervision?"* to read as: *"At what stage of your encounter with a student do you think a student should have supervision (whether intern/registrar/consultant)?"*
7. The following note was added next to the unique participant identifier numbers in the student's questionnaire; *"please do not complete this"*.
8. The following was changed: *"a"* procedure was changed to *"any"* procedure.
9. "*It was an intimate physical examination"* was added to the list of choices for reason for refusal of examination in the student's questionnaire. This was to match the list in the patient's questionnaire.
10. The following option was added to the list of choices for reason for refusal consent to perform a procedure in the patient's questionnaire "*I was scared that a student might make an error as he/she is not qualified enough."*
11. The following words were added *"healthcare professionals"* to the end of the sentence to all three questions in the student questionnaire that list this option - to read as:
    "The patient was already seen by too many students/healthcare professionals."
    "The patient was already examined by too many students/ healthcare professionals."
    "The procedure was already done on the patient by too many students/ healthcare professionals."

12. These amendments were made to the questionnaires and were approved by the Human Research Ethics Committee prior to undertaking the main study. See Appendix 20.

3.3. The Main Study

3.3.1. Baseline Demographics

The final sample size of all participants was 238. Of the 125 patients that were approached to be interviewed, five patients refused to participate, of which, three were from Surgery, one from Internal Medicine and one from Obstetrics & Gynaecology. Two patients were excluded after being interviewed because they did not meet the age inclusion criteria, one each from Internal Medicine and Obstetrics & Gynaecology. Therefore a total of 118 patients were included in the final analysis.

The self-administered questionnaires were left in the lecture rooms in each of the four departments for students to fill in until the first 30 students in each specialty completed them. This was achieved over a period of six weeks capturing two groups of students' rotating through each department making the prerequisite total student sample of 120 students. All the questionnaires that were completed by the students were included in the final analysis. The general characteristics of the patients and students are presented in Table 1 and 2. The overall mean age for the patients was 39 ± 14.3 years (mean ± SD) and 25 ± 1.9 years (mean ± SD) for the students. The differences in ages were statistically significant when comparing these two groups as expected ($p<0.001$).

With regard to the gender, a total of 91/118 (77%) patients were female. This was because all patients from Obstetrics & Gynaecology were female and almost all the care givers from the Paediatrics were mothers except for one father. With respect to the students, nearly two thirds

of the overall student group, 78/120, were also female and this was seen across all the specialties. As a result of this, comparisons based on gender were not done as the results would not be statistically relevant.

When comparing the educational level, almost all the patients had some level of education with most patients having received at least a secondary education (71/120). However, levels of education differed significantly across the four specialties ($p<0.001$). More than half of the overall medical students (69 /120) participating in the study were final year students i.e. GEMP 4 students, mainly from the Surgery Department. Over 70% of students were in GEMP4.

Table 1. Characteristics of the Patients

Variable	**All patients**	**Internal Medicine**	**Surgery**	**Obstetrics & Gynaecology**	**Paediatrics**	**p value**
Number	118 (100)	29 (24.6)	30 (25.4)	29 (24.6)	30 (25.4)	
Age (years)	39 (±14.3)	45 (±14.9)	49 (±11.8)	33 (±11.9)	28 (±6.9)	0.002
Gender						0.039
Male	27 (22.9)	10 (34)	16 (53)	0 (0)	1 (3)	
Female	91 (77.1)	19 (66)	14 (47)	29 (100)	29 (97)	
Education						<0.001
None	3 (2.5)	3 (10.3)	0 (0)	0 (0)	0 (0)	
Primary	24 (20.3)	8 (27.7)	6 (20)	6 (20.7)	4 (13.3)	
Secondary	71 (60.2)	13 (44.8)	24 (80)	15 (51.7)	19 (63.4)	
Tertiary	20 (17)	5 (17.2)	0 (0)	8 (27.6)	7 (23.3)	

All data expressed as N (%) except for age which is expressed as a mean (±SD).

Table 2: Characteristics of the Medical Students

Variable	**All students**	**Internal Medicine**	**Surgery**	**Obstetrics & Gynaecology**	**Paediatrics**	**p value**
N (%)	120 (25)	30 (25)	30 (25)	30 (25)	30 (25)	
Age (years)	25 (±1.9)	25 (±2.2)	24 (±2.1)	25 (±1.8)	24 (±1.8)	0.599

Gender						0.866
Male	42 (35)	12 (40)	9 (30)	10 (33)	11 (37)	
Female	78 (65)	18 (60)	21(70)	20 (67)	19 (63)	
Education						0.241
GEMP 3	51 (42.5)	15 (50)	8 (26.7)	14 (46.7)	14 (46.7)	
GEMP4	69 (57.5)	15 (50)	22 (73.3)	16 (53.3)	16 (53.3)	

All data expressed as N (%) except for age which is expressed as a mean (±SD).

3.3.2. Perceptions of Interactions

Patients' perceptions towards medical students are presented in table 3 and the students' perceptions of their interactions with patients are presented in table 4.

Of concern, around a third (41/118) of the overall patients were unaware that they were admitted to a teaching hospital, with rates worryingly higher in the departments of Surgery (50%) and Paediatrics 46.7%). Around 30% of the overall patients (35/118) did not understand that they were likely to encounter a medical student. Again, rates were worryingly higher in the departments of Surgery (50%) and Paediatrics (43.3%).

Only half of the patients (60/118) interviewed thought that they had a right to refuse interacting with the students. This number was much lower in Internal Medicine compared to other specialties with just over a third of the patients (10/29) understanding this right. With regard to the students, 93% of the overall group (111/118) agreed that a patient had a right to refuse interacting with them. However, there was a small number of them that thought otherwise. This was noted amongst some students in the specialties of Paediatrics (three students) and Obstetrics and Gynaecology (five students).

Overall, when comparing the patients versus students groups, both groups preferred smaller numbers of students of between 1-3 and 4-8 students at a bedside tutorial ($p<0.001$), although patients preferred smaller groups (between 1-3) compared the students (4-8 students) in

every specialty. There were 144 out of the overall 238 participants who thought 4-8 students should be allowed at a bedside tutorial whilst 55 participants thought that 1-3 students should be allowed at a bedside tutorial (data not in the tables). But whilst the patients' perceptions were split almost equally (just over 40% in either category) between 1-3 and 4-8 students at a bedside tutorial, the students leaned towards 4-8 students at a bedside tutorial with just over 77% of the student group agreeing to this.

With regard to the number of encounters where the patient had contact with students in one day, the patients preferred no more than 3 encounters a day, with nearly 79% (93/118) of patients agreeing to this. This trend was noted to be same across the four specialties. A similar trend was also noted across the student groups in each specialty, although the students in Internal Medicine were equally happy with 1-3 or 4-8 encounters per day.

The majority (> 80%) of patients were happy with no more than 3 students examining them in a single encounter – and this was clear across all the specialties. A similar picture was noted with the students where 70% of them thought that no more than 3 students should examine a patient in a single encounter.

There was a small proportion (4%) of patients who were happy to have more than 9 students examining them, however no student suggested this high number.

In general, the patients' and students' perceptions were positive across the specialties with over 95% of them having a favourable impression of their interaction with each other. However, there was a small number of patients mainly from Paediatrics, who expressed a negative view of their interactions with students. Only one student from Surgery had a negative view of interactions with patients.

Table 3: Patients' Perceptions of their Interactions with Medical Students

Group	All patients	Internal Medicine	Surgery	Obstetrics & Gynaecology	Paediatrics	p value
Number	118 (100)	29 (24.6)	30 (25.4)	29 (24.6)	30 (25.4)	
Are you aware that you are admitted to a teaching hospital?						0.018
No	41 (34.7)	6 (20.7)	15 (50)	6 (20.7)	14 (46.7)	
Yes	77 (65.3)	23 (79.3)	15 (50)	23 (79.3)	16 (53.3)	
Do you understand that you are likely to encounter a medical student?						<0.001
No	35 (29.7)	5 (17.2)	15 (50.0)	2 (6.9)	13 (43.3)	
Yes	83 (70.3)	24 (82.8)	15 (50.0)	27 (93.1)	17 (56.7)	
Do you think that you have a right to refuse interacting with a medical student?						0.128
No	58 (49.2)	19 (65.5)	14 (46.7)	10 (34.5)	15 (50.0)	
Yes	60 (50.8)	10 (34.5)	16 (53.3)	19 (65.5)	15 (50.0)	
How many students do you think should be allowed to be present at a bedside tutorial around you?						0.023
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
1-3	50 (42.4)	10 (34.5)	10 (33.3)	19 (65.5)	11 (36.7)	
4-8	51 (43.2)	13 (44.8)	12 (40.0)	10 (34.5)	16 (53.3)	
9 or more	17 (14.4)	6 (20.7)	8 (26.7)	0 (0.0)	3 (10.0)	
How many encounters in which students examine you, would you be comfortable within one day?						0.047
Missing	2 (1.7)	0 (0.0)	0 (0.0)	1 (3.4)	1 (3.3)	
1-3	93 (78.8)	17 (56.6)	26 (86.7)	26 (89.7)	24 (80.0)	
4-8	21 (17.8)	10 (34.5)	4 (13.3)	2 (6.9)	5 (16.7)	
9 or more	2 (1.7)	2 (6.9)	0 (0.0)	0 (0.0)	0 (0.0)	
How many students would you prefer to examine you during the encounter?						0.450
Missing	1 (0.9)	0 (0.0)	0 (0.0)	1 (3.4)	0 (0.0)	
1-3	95 (80.5)	21 (72.4)	23 (76.7)	26 (89.7)	25 (83.3)	
4-8	17 (14.4)	6 (20.7)	6 (20.0)	2 (6.9)	3 (10.0)	
9 or more	5 (4.2)	2 (6.9)	1 (3.3)	0 (0.0)	2 (6.7)	
What has been your impression of your interaction with students in general?						0.279
Negative	5 (4.2)	0 (0.0)	1 (3.3)	1 (3.4)	3 (10.0)	
Positive	113(95.8)	29 (100.0)	29 (96.7)	28 (96.6)	27 (90.0)	

All data expressed as N (%).

Table 4: Students' Perceptions of their Interactions with Patients

Group	All students	Internal Medicine	Surgery	Obstetrics & Gynaecology	Paediatrics	p value
Number	120 (25)	30 (25)	30 (25)	30 (25)	30 (25)	
Do you think a patient has a right to refuse interacting with a medical student?						0.023
Missing	0 (0.0)	0 (0.0)	1(3.3)	0 (0.0)	0 (0.0)	
No	8 (6.7)	0 (0.0)	0 (0.0)	5 (16.7)	3 (10.0)	
Yes	111(93.3)	30 (100.0)	29 (96.7)	25 (83.3)	27 (90.0)	
How many students do you think should be allowed to be present at a bedside tutorial around a patient?						0.098
Missing	3 (2.5)	0 (0.0)	2 (6.6)	1 (3.3)	0 (0.0)	
1-3	5 (4.2)	1 (3.3)	0 (0.0)	1 (3.3)	3 (10.0)	
4-8	93 (77.5)	26 (86.7)	23 (76.7)	19 (63.4)	25 (83.3)	
9 or more	19 (15.8)	3 (10.0)	5 (16.7)	9 (30.0)	2 (6.7)	
How many encounters in which students examine you, would you be comfortable within one day?						0.057
Missing	2 (1.7)	0 (0.0)	1 (3.3)	1 (3.3)	0 (0.0)	
1-3	84 (70.0)	15 (50)	25 (83.4)	22 (73.4)	22 (73.3)	
4-8	34 (28.3)	15 (50)	4 (13.3)	7 (23.3)	8 (26.7)	
9 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
How many students do you think should be allowed to examine patient during an encounter?						0.057
Missing	2 (1.7)	0 (0.0)	1(3.3)	1(3.3)	0 (0.0)	
1-3	84 (70.0)	15 (50.0)	25 (83.4)	22 (73.4)	22 (73.3)	
4-8	34 (28.3)	15 (50.0)	4 (13.3)	7 (23.3)	8 (26.7)	
9 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
What has been your impression of your interaction with patients?						0.382
Negative	1 (0.9)	0 (0.0)	1 (3.6)	0 (0.0)	0 (0.0)	
Positive	112 (99.1)	29 (100.0)	27 (96.4)	27 (100.0)	29 (100.0)	

All data expressed as N (%).

3.3.3. Supervision and the Consent Process

The perceptions of patients' and students'' towards each other in terms of the supervision and consent process are presented in tables 5 and 6 respectively.

With regard to supervision process, it was clear that many patients wanted a supervisor to be present when taking a history (64%), a task often left to the student to do on their own; during

the examination (71%) and when undertaking a procedure (70%). Patients perceptions of supervision differed significantly across the four departments in terms of the performing a physical examination (p= 0.007) and undertaking a procedure (p=0.013).

On the other hand, whilst the students were generally comfortable on their own with regards to history taking and physical examination, a third of the overall group of students wanted a supervisor present when examining the patient. With regard to performing a procedure on a patient, 96% of the overall student group wanted a supervisor present and this trend was noted across all the specialties.

With regard to the consent process, the majority of the patients across the various specialties wanted the student to ask for consent, although some of the patients felt that there was no need for consent during physical examination (28/118, 24%) or when undertaking a procedure (32/118, 27%). Of concern was that this was notably higher in Paediatrics for physical examination (10/30, 33%) or when undertaking a procedure (12/30, 40 %). In the student group, over 98% thought that seeking consent from the patient was necessary. This sentiment was noted across all the specialties.

When comparing the patient group's responses to that of the student group's with regards to refusal of consent, the responses were very different with 97% (115/166) of the patients' compared to 43% (51/166) of the students' saying that consent was never refused when requested to take a history or physically examine them (P<0.001). With regard to performing procedures, 98% (116/193) of the patients compared to 64% (77/193) of the students said that consent was never refused (P<0.001) (results not in tables). Hence the students' experience was totally different with the majority of students saying that at least 1-3 patients refused consent.

For those patients in Obstetrics & Gynaecology who responded to the question on refusal of consent during pregnancy and delivery of their baby, around 80% said that they never refused consent to students with the rest not responding to the question. The students on the other hand had a different experience with pregnant patients. Two students said that they experienced at least 1-3 patients refusing consent for interaction while pregnant and another two students said that they had a similar experience with at least 4-8 patients refusing consent. Only one student had an experience where a mother refused consent at the delivery of her baby.

Table 5: Patients' Perceptions of the Supervision and Consent Process with Medical Students

Group	**All patients**	**Internal Medicine**	**Surgery**	**Obstetrics & Gynaecology**	**Paediatrics**	**p value**
Number	118 (100)	29 (24.6)	30 (25.4)	29 (24.6)	30 (25.4)	
During history taking, do you think a student should have supervision?						0.402
No	42 (35.6)	12 (41.4)	10 (33.3)	7 (24.1)	13 (43.3)	
Yes	76 (64.4)	17 (58.6)	20 (66.7)	22 (75.9)	17 (56.7)	
During an examination, do you think a student should have supervision?						0.007
No	34 (28.8)	14 (48.3)	11 (36.7)	3 (10.3)	6 (20.0)	
Yes	84 (71.2)	15 (51.7)	19 (63.3)	26 (89.7)	24 (80.0)	
During a procedure on you, do you think a student should have supervision						0.013
No	35 (29.7)	13 (44.8)	10 (33.3)	2 (6.9)	10 (33.3)	
Yes	83 (70.3)	16 (55.2)	20 (66.7)	27 (93.1)	20 (70.3)	
During history taking, do you think a student should seek consent?						0.009
No	14 (11.9)	0 (0.0)	6 (20.0)	1 (3.5)	7 (23.3)	
Yes	104(88.1)	29 (100.0)	24 (80.0)	28 (96.5)	23 (76.7)	
During an examination, do you think a student should seek consent?						0.200
No	28 (23.7)	8 (27.6)	7 (23.3)	3 (10.3)	10 (33.3)	
Yes	90 (76.3)	21 (72.4)	23 (76.6)	26 (89.7)	20 (66.7)	
During a procedure, do you think a student should seek consent?						0.162
No	32 (27.1)	8 (27.6)	8 (26.7)	4 (13.8)	12 (40.0)	
Yes	86 (72.9)	21 (72.4)	22 (73.3)	25 (86.2)	18 (60.0)	
How many students have you refused consent to take a history from you?						0.523
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Nil	115(97.5)	27 (93.0)	30 (100.0)	29 (100.0)	29 (96.7)	

1-3	2 (1.7)	1 (3.5)	0 (0.0)	0 (0.0)	1 (3.3)	
4-8	1 (0.8)	1 (3.5)	0 (0.0)	0 (0.0)	0 (0.0)	
9 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
How many students have you refused consent to examine you?						0.789
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Nil	115(97.5)	28 (96.6)	30 (100)	28 (96.6)	29 (96.7)	
1-3	3 (2.5)	1 (3.4)	0 (0.0)	1 (3.4)	1 (3.3)	
4-8	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
9 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
How many students have you refused consent to perform a procedure on you?						0.565
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
Nil	116(98.3)	28 (96.6)	29 (96.7)	29 (100.0)	30 (100.0)	
1-3	2 (1.7)	1 (3.4)	1 (3.3)	0 (0.0)	0 (0.0)	
4-8	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
9 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	
With regards to your pregnancy, how many students have you refused consent to interact with you?						
Missing	-	-	-	5 (17.2)	-	
Nil	-	-	-	24 (82.8)	-	
1-3	-	-	-	0 (0.0)	-	
4-8	-	-	-	0 (0.0)	-	
9 or more	-	-	-	0 (0.0)	-	
With regards to your delivery of your baby, how many students have you refused consent to interact with you?						
Missing	-	-	-	6 (20.7)	-	
Nil	-	-	-	23 (79.3)	-	
1-3	-	-	-	0 (0.0)	-	
4-8	-	-	-	0 (0.0)	-	
9 or more	-	-	-	0 (0.0)	-	

All data expressed as N (%). "-": not applicable.

Table 6: Students' Perceptions of the Supervision and Consent Process with Patients

Group	**All students**	**Internal Medicine**	**Surgery**	**Obstetrics & Gynaecology**	**Paediatrics**	**p value**
Number	120 (25)	30 (25)	30 (25)	30 (25)	30 (25)	
During history taking, do you think a student should have supervision?						0.691
No	105 (91.3)	26 (92.9)	28 (93.3)	27 (93.1)	24 (85.7)	
Yes	10 (8.7)	2 (7.1)	2 (6.7)	2 (6.9)	4 (14.3)	
During an examination, do you think a student should have supervision?						0.045
No	76 (65.0)	23 (79.3)	20 (66.7)	20 (69.0)	13 (44.8)	
Yes	41 (35.0)	6 (20.7)	10 (33.3)	9 (31.0)	16 (55.2)	

During a procedure on you, do you think a student should have supervision?						0.270
No	5 (4.2)	1 (3.3)	0 (0.0)	3 (10.0)	1 (3.5)	
Yes	114 (95.8)	29 (96.7)	30 (100)	27 (90.0)	28 (96.5)	
During history taking, do you think a student should seek consent?						0.288
No	3 (2.5)	1 (3.3)	0 (0.0)	0 (0.0)	2 (6.7)	
Yes	117(97.5)	29 (96.7)	30 (100.0)	30 (100.0)	28 (93.3)	
During an examination, do you think a student should seek consent?						0.572
No	2 (1.7)	0 (0.0)	0 (0.0)	1 (3.5)	1 (3.3)	
Yes	115(98.3)	29 (100.0)	29 (100.0)	28 (96.5	29 (96.7)	
During a procedure, do you think a student should seek consent?						0.565
No	2 (1.7)	0 (0.0)	0 (0.0)	1 (3.4)	1 (3.3)	
Yes	116(98.31)	30 (100.0)	29 (100.0)	28 (96.6)	29 (96.7)	
How many patients have refused consent to let you take a history from them?						<0.001
Missing	9 (7.5)	0 (0.0)	3 (10.0)	5 (16.7)	1 (3.3)	
Nil	51 (42.5)	4 (13.3)	12 (40.0)	11 (36.7)	24 (80.0)	
1-3	38 (31.7)	16 (53.3)	11 (36.7)	6 (20.0)	5(16.7)	
4-8	16 (13.3)	7 (23.3)	3 (10.0)	6 (20.0)	0 (0.0)	
9 or more	6 (5.0)	3 (10.0)	1(3.3)	2 (6.6)	0 (0.0)	
How many patients have refused consent to let you examine them?						<0.001
Missing	8 (6.6)	1 (3.3)	2 (6.7)	5 (16.7)	0 (0.0)	
Nil	51 (42.5)	6 (20.0)	7 (23.3)	13 (43.3)	25 (83.3)	
1-3	42 (35.0)	16 (53.4)	14 (46.7)	7 (23.3)	5 (16.7)	
4-8	14 (11.7)	6 (20.0)	6 (20.0)	2 (46.7)	0 (0.0)	
9 or more	5 (4.2)	1 (3.3)	1 (3.3)	3 (10.0)	0 (0.0)	
How many patients have refused consent to let you perform a procedure on them?						0.172
Missing	11 (9.2)	1 (3.3)	5 (16.7)	5 (16.7)	0 (0.0)	
Nil	77 (64.2)	20 (66.7)	16 (53.3)	15 (50.0)	26 (86.7)	
1-3	24 (20.0)	7 (23.3)	6 (20.0)	7 (23.3)	4 (13.3)	
4-8	6 (5.0)	2 (6.7)	2 (6.7)	2 (6.7)	0 (0.0)	
9 or more	2 (1.8)	0 (0.0)	1 (3.3)	1 (3.3)	0 (0.0)	
With regards to your interaction with a pregnant patient, how many patients have refused consent to interact with you?						
Missing	-	-	-	1 (3.3)	-	
Nil	-	-	-	25 (83.3)	-	
1-3	-	-	-	2 (6.7)	-	
4-8	-	-	-	2 (6.7)	-	
9 or more	-	-	-	0 (0.0)	-	
With regards to your interaction with a mother at a delivery of her baby, how many patients have refused consent to interact with you?						
Missing	-	-	-	3 (10.0)	-	
Nil	-	-	-	26 (86.7)	-	
1-3	-	-	-	1 (3.3)	-	
4-8	-	-	-	0 (0.0)	-	
9 or more	-	-	-	0 (0.0)	-	

All data expressed as N (%). "-": not applicable.

3.3.4. Reasons for Refusal of Consent

The reasons varied for refusal of consent given by patients: for history taking, they included "seen by too many students" (1), "being too tired" (1), "being upset" (1) and "no privacy" (1); for physical examination reasons included "seen by too many students" (1) and "being upset" (2) and for refusal of consent for performing procedures the only reason given was "being upset" (1).

According to the students, across all specialties the two main reasons for refusal of consent by patients for history taking were "seen by too many students/ healthcare professionals" (45) and "being too tired" (39). Other reasons given included "being too sick" (16), "being upset" (12) and "no privacy" (4). Some students listed more than one reason.

The top three reasons given by students for refusal of consent by patients for physical examination included "seen by too many students/healthcare professionals" (40) , "being too tired" (35) and "being too sick" (19). Other reasons given included "being upset" (7), an intimate physical examination (9) and "no privacy" (3). The top three reasons given by students for refusal of consent by patients for procedures included "being upset" (12), "being too tired" (10) and "seen by too many students/healthcare professionals" (9). Other reasons given included "being too sick" (5) and "no privacy" (5).

The reasons given by students for refusal of consent by pregnant patients included "being upset" (2) and "seen by too many students" (1).

The reason given by students for refusal of consent by a mother at a delivery of her baby included "no privacy" (1).

3.4. Conclusion

It is evident that despite most patients having some level of education, they were unaware that they were admitted to a teaching institution. The lack of unawareness of their right to refuse to interact with students is a concern. What also emerged quite clearly was the fact that both patients and students preferred small groups of students. With regard to the supervision process, it was clear that most patients would like a supervisor to be present.

In terms of informed consent, the majority of the patients and students across the various specialties wanted students to seek for informed consent for interacting with a patient. With regard to refusal of consent, the students' experience was totally different from that expressed by the patients. Most patients said they never refused consent to students, while a third of students said at least up to three patients refused consent to be examined by them. The likely reason for this is that the patients who refused consent were not included in the cohort of patients under study in this project. Of note, the numbers of individuals, whether students or healthcare professionals, was cited by the students as the most common reason for refusal of consent.

CHAPTER 4

4. DISCUSSION

4.1. Introduction

An overview of the study linking the normative and descriptive aspects are presented in this chapter. The normative component of the study underscores the importance for training more doctors in South Africa while the empirical component gives the reality of the situation on the ground – the actual perceptions of patient-student towards each other which is relevant in this normative concern

4.2. Overview and Discussion of the Results

With the move to increase the number of medical students because of the urgent need to increase the number of doctors in South Africa, there is a need to understand the local context.

This is the first study from a South African perspective to provide information both on the perception of patients and medical students towards each other in an inpatient setting and across four specialties. Studies in the literature are both from the outpatient and inpatient setting but they only focus on the patients' perceptions and not the student's as has been done in this study.(6,7,8,27–33)

It is often assumed that the term "Academic' in the hospital's name suffices. Despite almost all the patients having an education, with most patients having at least a secondary education - nearly a third of patients were unaware that they were admitted to a teaching hospital and that they were likely to encounter a medical student and this is worrying.

When it came to the rights of the patients, what was concerning was that approximately half of the patients were unaware of their right to refuse interacting with the students. In fact, a large proportion of the patients said that had never refused consent to a clinical encounter with a student. This finding was consistent with other studies globally.(8,9)

This study also highlighted the preferred patient to student ratios. The majority of patients and students preferred smaller clinical group sizes of no more than eight students at a bedside tutorial. In addition, both the groups also preferred no more than three encounters in a day with no more than three students examining them in a single encounter – and this was clear across all the four specialties. This finding was similar to other studies that highlighted a preference for small groups of students at the bedside.(8,9,42)

What was interesting was that most of the patients wanted a supervisor to be present during the whole clinical encounter – from taking a history, a task usually left to the student to do on their own, to physical examination and performing a procedure. The students on the other hand, whilst comfortable on their own to obtain a history -a third of them wanted the presence of a supervisor during this interaction. Understandably, nearly all of them wanted supervision during a procedure and this trend was noted across the departments and not in the surgical disciplines only where major procedures are performed. These finding were consistent with other studies. (8,9,37,39)

Informed consent is an essential component of the clinical consultation. This concept is taught in the early years of the medical training of these students and prior to them reaching their clinical years. Of concern was the 2% of the students who felt that this process was not necessary in this study. With regard to the patients - nearly a third of the overall group of patients felt that there was no need for consent when undertaking physical examination or a procedure.

There were very different responses with regards to refusal of consent. When compared to students, the majority of patients said that they had never refused consent to students. The students' experience was totally different on the other hand – a third of the students said that up to three patients had refused them consent to be examined by them. It may be because the patients who refused consent were not included in the cohort of patients interviewed in this study. Worryingly, the most common reason cited by students for refusal of consent by patients was the excessive numbers of students and healthcare professionals that they had to interact with – especially if the numbers of students are to be increased at medical schools. Therefore it is crucial for patients to be educated on the importance of their rights and their role in the training of medical students should training institutions contemplate increasing their student numbers. In addition, these institutions will need to take cognisance of numbers of students that patients will be able to tolerate during an encounter. However, what this means considering the dire shortage of doctors and the ability of schools to produce increasing numbers in the context of severe resource constraints remains to be seen.

4.3. Does "Ought" imply "Can"?

In general, normative claims can be empirically tested and are based on Kant's moral principle where "*ought implies can*". According to Kant, if something is a moral obligation (a duty), then we ought to (should) do it - a basic test of moral obligation. Whilst the normative argument may imply what one ought to do, the empirical enquiry has to substantiate this claim that it is possible to do it. However, the inability to understand the facts often leads to challenges in moral decision making. Normative arguments depend on facts and in the case where normative theory determines the facts that can be empirically tested, the real world circumstances can cancel the obligation.(43)

From a legal point of view, the right to access basic health care is affirmed in section 27 of South African Constitution.(11) This is of critical importance because it guarantees one of our basic human rights. Therefore, the State ought to make provisions for this and access to healthcare workers is one of the ways in which this right can be realised. In the setting of healthcare, the legal framework that guides the State are the Bill of Rights, (11) the NHA (12) and the Patients' Rights Charter (13). In order to achieve this, the State is in the process of rolling out universal health coverage under the umbrella of the NHI program.(21)

However, the doctor shortage is impacting this program and whilst there is a serious need to produce more medical graduates, a critical component of the medical education training system is the doctor-patient interaction - as student groups get larger, patients might begin to refuse this interaction. Therefore, while there is a legal obligation to train more doctors the likely infringement on patients' rights is a concern.

From an ethical point of view, the State also ought to make the same provisions for healthcare for its people. The utilitarian argument supports advancing the need for an improved health care system for society in the long term, and outweighs the possible harms on an individual patient involved in clinical training now. The spirit and essence of Ubuntu suggests that because we all benefit from the presence of a functioning public healthcare system, we all ought to be prepared to contribute to it. (5)

Similarly, it is frequently taken for granted that patients ought to participate in clinical teaching because they have benefited from the care of doctors,(4,5) but patients' have a right to autonomy and should be able to make their own decisions. However, the concerning question is: how will this be possible if a third of the overall patients do not understand that they are likely to encounter a medical student? Only half the patients understood their right to

refuse interacting with students. It could be deduced that not all of them understood their rights despite having some level of formal education.

In addition, it is ethically imperative that appropriately permissible numbers of patient to student ratios are realised, especially in light of growing student numbers. The most common reason cited by students for refusal of consent by patients was the excessive numbers of students and healthcare professionals that they had to interact with. This is of real concern especially if the numbers of students are to increase at medical universities.

Both the patients and students in the empirical study preferred smaller student numbers in clinical groups – one could infer that the students were concerned about what might happen to the patients should the numbers increase too dramatically. Several sections in the Bill of Rights affirm the importance of patients' autonomy in the setting of healthcare.(11)

An important consideration is that even though it is important to train more medical students to become the country's future doctors for the continuance of medical practice, this role ought not to be placed solely on the shoulders of patients. While they do have a moral obligation to partake in this process, there is an equally relevant moral obligation on behalf of the state to ensure that their rights are protected. This is made more acute when patients' levels of understanding and degrees of perception are inadequate.

Respect for autonomy is important and allowing patients to make their own choices about their health should be encouraged and informed consent should be sought in the setting of medical education. In this study, the vast majority of the patients and students across the specialties wanted students to seek informed consent. Consequently, it cannot be assumed to be tacit consent just because patients have presented themselves to the teaching hospital for care and especially when a third of them were unaware that they were admitted to a teaching hospital. In fact, informed consent is an essential component of a clinical consultation for all

healthcare professionals. It must be emphasized that there is no legal requirement for patients to allow medical students to practice on them and lack of consent could be tantamount to assault. There are no specific regulations for the code of conduct for medical students in South Africa as it is commonly inferred that because they are registered with the HPCSA, the same policies apply to them. However, there is an urgent need for a formal set of professional guidelines on patient-student interactions and guidelines on ethically permissible patient to student ratios to be drawn up by the HPCSA. This should be separate from that for qualified doctors. Similarly, teaching hospitals should have a patient information and consent form. Therefore, the normative component of this study has highlighted the importance for training more doctors – it has done so within context. The empirical component of the project has presented facts of the situation, the actual perceptions of patient-student interactions on the ground which has to be applied to this normative concern – stressing the need for respecting and valuing the rights of patients.

CHAPTER 5

5. CONCLUSIONS AND RECOMMENDATIONS

This chapter concludes the research report and provides recommendations that consider patient safeguards while responding to the country's need to train more medical students.

The dire need for more doctors in South Africa was recently highlighted in the 2019 WHO report which stated that our average density of medical doctors was a mere 9.1 doctors for 10,000 population.(2) The South African government and medical schools have heeded the call to increase the number of medical doctors but several studies have shown that the rights of patients involved in the training of these expanding numbers of medical students need to be taken into consideration. The importance of respecting patients' preferences including the fact that they favour smaller numbers of students in a teaching interaction was a message that clearly emerged from studies from Syria and Sudan where the number of patient to student ratios in an in-patient setting were discussed.(8,9) This is affirmed by data from the current study – the first from a South African perspective, the intention of which was to assess the ethical implications of training increasing numbers of medical students to the level at which patients' rights could be infringed.

Rather than concentrating large numbers of medical students in teaching hospitals attached to these few medical schools – a recommendation would be to produce more medical schools in South Africa. This would allow for these additional numbers of students to be redistributed and spread across the country to other provinces, and they will also receive the benefits of having medical institutions in their province. With all the criticisms of the Nelson

Mandela/Fidel Castro Medical School Training Program,(3) the funding from this program could be redirected to this initiative instead of sending students to train in Cuba.

Some medical councils such as the New Zealand MCNZ (28), the UK GMC (29) and the Irish Medical Council (30) have regulations regarding medical students' conduct in terms of patient management but they do not give guidance on the ethically permissible numbers of students to patient ratios. From a South African context, the HPCSA has no specific regulations either. Apart from a stipulation in booklet 9 about informed consent for qualified medical professionals which states that if a student is involved in a patient's care, this patient must be informed about it – it is assumed that one would make inferences to students from this document and this is not adequate.(27)

Similarly, from a legal point of view, the Bill of Rights affirms the importance of patients' autonomy,(11) the NHA stresses certain legal requirements when it comes to patient care (12) and the Patients' Rights Charter emphasizes the rights of patients in the setting of their health seeking behaviour.(13) Nevertheless, simply inferring from these regulations in the context of medical education is insufficient. These laws and policies do not explicitly discuss patients' rights in the setting of the clinical teaching platform nor do they discuss the role of medical schools. It is quite clear that there are issues with the process of informed consent in these circumstances especially where procedures are concerned as these are performed by inexperienced students. The presumption that consent is given merely because patients presented themselves to the teaching hospital is wrong. This reality is often seen in the acute setting where clinical staff are under immense pressure and the consent process is often limited and more importantly, patients are not informed that an inexperienced medical student is performing the procedure on them – denying their autonomy to make choices.

Teaching hospitals urgently need to develop a patient information form explaining what an "academic" hospital is, the importance of training of medical students and what a patient should expect in a clinical encounter with medical students – a document to reflect this is drawn up as part of this study and presented below in figure 1 below.

This document informs the patient that they are seeking care at an academic hospital and explains what this means – that this is a teaching hospital where medical students are being trained and that one is likely to encounter such students. It further elaborates what a clinical encounter is and what is expected of this clinical encounter. It emphasizes that the patient's involvement is entirely voluntary and refusal to participate in the process will not affect their care. It directs them to the necessary persons should they have any complaints about their interaction with a medical student.

The document ends with an informed consent section where it clarifies their understanding about the fact that the person in question is not a qualified practitioner and is under supervision. This document must be made available to patients and their families on admission to the hospital and they must be given time to decide on when whether they want to participate in the process of training doctors. This document must be kept in the patient's bed letter so as to inform the medical student who approaches a patient for an interaction.

Figure 1: Patient information and informed consent for admission to a teaching hospital

(NAME OF TEACHING HOSPITAL)

PATIENT INFORMATION FORM FOR ADMISSION TO AN ACADEMIC HOSPITAL.

You have decided to seek medical care at an academic hospital. This is a teaching hospital where medical students are being trained to become doctors and you are likely to encounter such students.

In a clinical encounter with you, these medical students are taught how to interact with you as a patient, when talking to you about your medical problems, examining you or even doing a test/procedure on you.

Your involvement in their clinical training is very important but your participation is entirely voluntary and refusal to participate will not affect you in any way.

If you have any complaints about your interaction with a medical student, you can inform the doctor or sister in charge of the ward or clinic or lodge a complaint at the Quality Assurance Department.

INFORMED CONSENT

I understand that I am admitting myself to an academic hospital on my own cognisance and that I am likely to encounter medical students.

I understand that medical students are working under supervision and will not make any independent decisions about my care, but will act under the instruction of a supervisor.

I consent to medical students disclosing any of my information about my background, diagnosis and treatment options for teaching purposes.

I understand that my participation is voluntary, that I can stop at any time and that I will still continue to receive medical treatment.

Patient

_____

Printed Name Signature/Thumbprint Date and Time

Witness/translator

_____

Printed Name Signature/Thumbprint Date and Time

As suggested by this study and other international studies,(6–9) medical schools must take cognisance when planning teaching timetables – to limit the size of student groups to an acceptable norm of no more than eight students. If the groups are larger, they could be split into smaller manageable subgroups to allow repeated interactions with the same patient but no more than three in a day if warranted. Other options to split the excessive exposure to patients could include the development of teaching videos and simulated labs in the clinical years. This would be beneficial to the teachers as well, as it would also reduce their workload as result. The videos would allow for repeated viewing or practically to demonstrate a particular concept without upsetting or harming a patient – prior to allowing a physical interaction with the student. The importance of the presence of a supervisor at this next stage of contact with a patient is important – both for the safety of the patient and the necessary requirement for supervision of the student. The extension of the peripheral teaching platform should be further encouraged and strengthened. It would allow not only for accommodating the increased number of senior year clinical students but as an indirect result, improvement in the quality of patient care because of the academic status of the hospital.

The HPCSA needs to draw up formal professional guidelines on patient-student interactions – emphasizing the importance of respecting the rights of patients; and the students' obligations and duties including professionalism, communication and informed consent. This document also needs to explicitly state the permissible ratios of students per patient at a bedside tutorial. It is important to have such guidelines for medical schools and students. This will allow for uniformity across the country in the medical curriculum in terms of professionalism on the training platform where medical students learn their clinical skills. The basic requirements are reflected in figure 2.

Figure 2: Requirements for all medical students

- Behave professionally at all times.
- Introduce oneself to the patient as a medical student.
- Use a translator if necessary and don't assume the patient understands your language.
- Take into consideration the patient's cultural background.
- Ask for permission on how one would like to be addressed – or else address the patient as Mr, Ms. or Mrs and their last name.
- Respect the autonomy, privacy and confidentiality of the patient.
- Obtain informed consent and seek supervision at every interaction – this includes taking a history, during physical examination and performing a procedure.
- Recognise the tension that the patient's right to refuse consent takes precedence over your right of medical training.
- Be cognisant of the number of students around the bedside - no more than eight students should be present at any one time.
- By being registered with the HPCSA – you are obliged to comply with all the ethical rules, regulations and policy guidelines of the council.

Furthermore, an important recommendation is patient awareness of the importance of their participation in medical student training. This is a country need. The objective of the HPCSA is to guide the professions and protect the public. They do this by setting training standards and making sure these standards continue being met. However, from the utilitarian perspective, patients need to be made aware of the importance of their cooperation in medical student training. The HPCSA has a responsibility to raise awareness on this issue as part of their responsibility to the public. A recommendation will be made to the HPCSA to include this in their drive when educating the general public on various topics.

These recommendations have been submitted to the Registrar of the HPCSA, and the Chairman of the South African Committee of Medical Deans on behalf of all medical universities for consideration into their policies – see appendices 22 and 23.

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7. APPENDICES

7.1. Appendix 1: PLAGIARISM DECLARATION



PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I COLIN MENEZES (Student number: 0101826W) am a student registered for the degree of Master of Science in Medicine in Bioethics and Health Law in the academic year 2019.

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this is not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.
- I have included as an appendix a report from "Turnitin" (or other approved plagiarism detection) software indicating the level of plagiarism in my research document.

Signature: _____ Date: 30/7/2019

1

7.2. Appendix 2: TURNITIN REPORT SUMMARY

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3	Submitted to University of Cape Town Student Paper	1%
4	Submitted to University of KwaZulu-Natal Student Paper	1%
5	Submitted to University of Stellenbosch, South Africa Student Paper	<1%
6	Submitted to University of Auckland Student Paper	<1%
7	Jude T Waterbury. "Refuting patients' obligations to clinical training: a critical analysis of the arguments for an obligation of patients to participate in the clinical education of medical students", Medical Education, 3/2001 Publication	<1%

7.3. Appendix 3: DATA COLLECTION FORM: PATIENTS IN INTERNAL MEDICINE

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier number:_____

2. Age:_____

3. Gender:
   a) Male
   b) Female

4. Level of education:
   a) None
   b) Primary
   c) Secondary
   d) Tertiary

5. Are you aware that you are admitted to a teaching hospital? Yes/No.

6. Do you understand this means that you are likely to encounter a medical student who is training to become a doctor? Yes/No.

7. Do you think that you have a right to refuse interacting with a medical student? Yes/No.

8. How many students do you think should be allowed to be present at a bedside tutorial around you? _____

9. How many encounters in which students examine you would you be comfortable with in one day? _____

10. How many students would you prefer to examine you during the encounter? _____

11. At what stage of your encounter with a student do you think a student should have supervision?
    a) During history taking from you? Yes/No.
    b) During examining you? Yes/No.
    c) During a procedure on you? Yes/No.

12. At what stage of your encounter with a student do you think a student should seek consent?
    a) Before they take a history from you? Yes/No.
    b) Before they examine you? Yes/No.
    c) Before they perform a procedure on you? Yes/No.

13. How many students have you refused consent to take a history from you?
    _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) There was no privacy.

14. How many students have you refused consent to examine you? _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) It was an intimate physical examination
    f) There was no privacy.

15. How many students have you refused consent to perform a procedure on you?
    _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) I was scared that a student might make an error as he/she is not qualified enough.
    f) There was no privacy.

16. What has been your impression of your encounter with students in general?
    a) Positive
    b) Negative

7.4. Appendix 4: DATA COLLECTION FORM: PATIENTS IN SURGERY

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier number:_____

2. Age:_____

3. Gender:
   a) Male
   b) Female

4. Level of education:
   a) None
   b) Primary
   c) Secondary
   d) Tertiary

5. Are you aware that you are admitted to a teaching hospital? Yes/No.

6. Do you understand this means that you are likely to encounter a medical student who is training to become a doctor? Yes/No.

7. Do you think that you have a right to refuse interacting with a medical student? Yes/No.

8. How many students do you think should be allowed to be present at a bedside tutorial around you? _____

9. How many encounters in which students examine you would you be comfortable with in one day? _____

10. How many students would you prefer to examine you during the encounter? _____

11. At what stage of your encounter with a student do you think a student should have supervision?
    a) During history taking from you? Yes/No.

b) During examining you? Yes/No.
c) During a procedure on you? Yes/No.

12. At what stage of your encounter with a student do you think a student should seek consent?
    a) Before they take a history from you? Yes/No.
    b) Before they examine you? Yes/No.
    c) Before they perform a procedure on you? Yes/No.

13. How many students have you refused consent to take a history from you?
    _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) There was no privacy.

14. How many students have you refused consent to examine you? _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) It was an intimate physical examination
    f) There was no privacy.

15. How many students have you refused consent to perform a procedure on you?
    _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) I was scared that a student might make an error as he/she is not qualified enough.
    f) There was no privacy.

16. What has been your impression of your encounter with students in general?
    a) Positive
    b) Negative

7.5. Appendix 5: DATA COLLECTION FORM: PAEDIATRIC CAREGIVERS

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier number:_____

2. Age:_____

3. Gender:
   a) Male
   b) Female

4. Level of education of care-giver:
   a) None
   b) Primary
   c) Secondary
   d) Tertiary

5. Are you aware that your child is admitted to a teaching hospital? Yes/No.

6. Do you understand this means that you and your child is likely to encounter a medical student who is training to become a doctor? Yes/No.

7. Do you think that you and your child have a right to refuse interacting with a medical student? Yes/No.

8. How many students do you think should be allowed to be present at a bedside tutorial around your child? _____

9. How many encounters in which students examine you would you be comfortable with in one day? _____

10. How many students would you prefer to examine you during the encounter? _____

11. At what stage of your encounter with a student do you think a student should have supervision?
    a) During history taking? Yes/No.

b) During examination of your child? Yes/No.
c) During a procedure on your child? Yes/No.

12. At what stage of your encounter with a student do you think a student should seek consent?
    a) Before they take a history? Yes/No.
    b) Before they examine your child? Yes/No.
    c) Before they perform a procedure on your child? Yes/No.

13. How many students have you refused consent to take a history about your child's condition? _____
    What were the possible reasons?
    a) My child was already seen by too many students.
    b) My child was too tired.
    c) My child was too sick.
    d) My child was upset.
    e) There was no privacy.

14. How many students have you refused consent to examine your child? _____
    What were the possible reasons?
    a) My child was already seen by too many students.
    b) My child was too tired.
    c) My child was too sick.
    d) My child was upset.
    e) It was an intimate physical examination
    f) There was no privacy.

15. How many students have you refused consent to perform a procedure on your child? _____
    What were the possible reasons?
    a) My child was already seen by too many students.
    b) My child was too tired.
    c) My child was too sick.
    d) My child was upset.
    e) I was scared that a student might make an error as he/she is not qualified enough.
    f) There was no privacy.

16. What has been your impression of your encounter with students in general?
    a) Positive
    b) Negative

7.6. Appendix 6: DATA COLLECTION FORM: PATIENTS IN OBSTETRICS AND GYNAECOLOGY

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier number:_____
2. Age:_____
3. Gender: Female
4. Level of education:
   a) None
   b) Primary
   c) Secondary
   d) Tertiary
5. Are you aware that you are admitted to a teaching hospital? Yes/No.
6. Do you understand this means that you are likely to encounter a medical student who is training to become a doctor? Yes/No.
7. Do you think that you have a right to refuse interacting with a medical student? Yes/No.
8. How many students do you think should be allowed to be present at a bedside tutorial around you? _____
9. How many encounters in which students examine you would you be comfortable with in one day? _____
10. How many students would you prefer to examine you during the encounter? _____
11. At what stage of your encounter with a student do you think a student should have supervision?
    a) During history taking from you? Yes/No.
    b) During examining you? Yes/No.

c) During a procedure on you? Yes/No.

12. At what stage of your encounter with a student do you think a student should seek consent?
    a) Before they take a history from you? Yes/No.
    b) Before they examine you? Yes/No.
    c) Before they perform a procedure on you? Yes/No.

13. How many students have you refused consent to take a history from you? _____
    What were the possible reasons?
    f) I was already seen by too many students.
    a) I was too tired.
    b) I was too sick.
    c) I was upset.
    d) There was no privacy.

14. How many students have you refused consent to examine you? _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) It was an intimate physical examination
    f) There was no privacy.

15. How many students have you refused consent to perform a procedure on you? _____
    What were the possible reasons?
    a) I was already seen by too many students.
    b) I was too tired.
    c) I was too sick.
    d) I was upset.
    e) I was scared that a student might make an error as he/she is not qualified enough.
    f) There was no privacy.

16. With regards to your pregnancy, how many students have you refused consent to interact with you? _____
    What were the possible reasons?
    a) The history was taken by too many students.
    b) The physical examination was already done by too many students.
    c) I was too tired.
    d) I was too sick.
    e) I was upset.
    f) There was no privacy.

17. With regards to your delivery of your baby, how many students have you refused consent to interact with you? _____
    What were the possible reasons?
    a) The history was taken by too many students.
    b) The physical examination was already done by too many students.
    c) I was too tired.
    d) I was too sick.
    e) I was upset.
    f) There was no privacy.

18. What has been your impression of your encounter with students in general?
    a) Positive
    b) Negative

7.7. Appendix 7: PARTICIPANT INFORMATION AND INFORMED CONSENT FORM

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

Good Day. My name is Colin Menezes and I am conducting a study in fulfilment of my MSc Med degree requirements in the field of Bioethics and Health Law.

As part of their training to become doctors, medical students are taught how to interact with patients in a particular manner when talking to patients about the medical problems, examining or even doing a test/procedure on them.

I am inviting you to take part in this study where I want to learn more on how patients and medical students interact with each other when seeking medical care. Your interaction will help me better understand things.

What is involved in the study?

This study involves you completing a questionnaire with me with the help of a trained nurse should the need arise if there is a language barrier. You will be asked questions on your personal interaction with medical students that interact with you during your admission. This will take approximately 15 minutes of your time.

There are no physical risks or benefits involved in this study. Your participation is completely voluntary, refusal to participate will not affect you in any way. You will not be reimbursed for participating in this study.

Confidentiality:

All efforts will be made to keep your information confidential. Your questionnaire has a special identifier number with no personal identifiers. Information collected may be disclosed if required by law or by the Wits Human Research Ethics Committee who has provided permission to undertake this study.

All information obtained will be used for the development of possible patient-student guidelines and journal publications.

Contact details of researcher:

If you have any more questions, you can contact me, Professor Colin Menezes, on 011 488 3621 or 011 933 8940.

Contact details of Wits Human Research Ethics Committee:

If you have any complaints, you can contact Professor Cleaton-Jones or Ms Zanele Ndlovu at the Wits HREC on 011 717 1252 or 2700.

INFORMED CONSENT

I have read the information about the study and understand what the study is about.

I understand that there are no benefits and risks in participating in this study.

I understand that I do not have to participate in the study and that if I do, I can stop being in the study at any time and that I will still continue to get the medical treatment.

I have had a chance to ask questions and understood the answers to those questions.

I understand that my name and date of birth will never be released with any of the study results.

Study participant

_____

Printed Name Signature/Thumbprint Date and Time

Study Doctor

I, _____ confirm that participant has been fully informed about the nature and risks of this study.

_____

Printed Name Signature Date and Time

Translator or other person explaining consent

_____

Printed Name Signature/Thumbprint Date and Time

Witness

_____

Printed Name Signature/Thumbprint Date and Time

7.8. Appendix 8: DATA COLLECTION FORM: MEDICAL STUDENTS IN INTERNAL MEDICINE ROTATION

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier numbers :_____(please do not complete this).

2. Age:_____

3. Gender:
   a) Male
   b) Female

4. Year of study:
   a) GEMP 3
   b) GEMP 4

5. Do you think a patient has a right to refuse interacting with a medical student? Yes/No.

6. How many students do you think should be allowed to be present at a bedside tutorial around a patient? _____

7. How many students do you think should be allowed to examine patient during one encounter? _____

8. At what stage of your encounter with a patient do you think a student should have supervision (whether intern/registrar/consultant)?
   a) During history taking? Yes/No.
   b) During examination? Yes/No.
   c) During any procedure? Yes/No.

9. At what stage of your encounter with a patient do you seek consent?
   a) Before you take history from a patient? Yes/No.
   b) Before examine a patient? Yes/No.
   c) Before you perform any procedure? Yes/No.

10. How many patients have refused consent to let you take a history from them?
_____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The patient was already seen by too many students/healthcare professionals.
        b) The patient was too tired.
        c) The patient was too sick.
        d) The patient was upset.
        e) There was no privacy.

11. How many patients have refused consent to let you examine them? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The patient was already examined by too many students/ healthcare professionals.
        b) The patient was too tired.
        c) The patient was too sick.
        d) The patient was upset.
        e) It was an intimate physical examination
        f) There was no privacy.

12. How many patients have refused consent to let you perform a procedure on them?
_____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The procedure was already done on the patient by too many students/ healthcare professionals.
        b) The patient was too tired.
        c) The patient was too sick.
        d) The patient was upset.
        e) There was no privacy.

13. What has been your impression of your encounter with patients?
    a) Positive
    b) Negative

7.9. Appendix 9: DATA COLLECTION FORM: MEDICAL STUDENTS IN SURGERY ROTATION

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier number: _____ (please do not complete this).

2. Age:_____

3. Gender:
   a) Male
   b) Female

4. Year of study:
   a) GEMP 3
   b) GEMP 4

5. Do you think a patient has a right to refuse interacting with a medical student? Yes/No.

6. How many students do you think should be allowed to be present at a bedside tutorial around a patient? _____

7. How many students do you think should be allowed to examine patient during one encounter? _____

8. At what stage of your encounter with a patient do you think a student should have supervision (whether intern/registrar/consultant)?
   a) During history taking? Yes/No.
   b) During examination? Yes/No.
   c) During any procedure? Yes/No.

9. At what stage of your encounter with a patient do you seek consent?
   a) Before you take history from a patient? Yes/No.
   b) Before examine a patient? Yes/No.
   c) Before you perform any procedure? Yes/No.

10. How many patients have refused consent to let you take a history from them? _____

a) Did you explore the reasons as to why they refused consent? Yes/No.
b) If yes, what were the possible reasons?
    a) The patient was already seen by too many students/healthcare professionals.
    b) The patient was too tired.
    c) The patient was too sick.
    d) The patient was upset.
    e) There was no privacy.

11. How many patients have refused consent to let you examine them? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The patient was already examined by too many students/healthcare professionals.
        b) The patient was too tired.
        c) The patient was too sick.
        d) The patient was upset.
        e) It was an intimate physical examination
        f) There was no privacy.

12. How many patients have refused consent to let you perform a procedure on them? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The procedure was already done on the patient by too many students/healthcare professionals.
        b) The patient was too tired.
        c) The patient was too sick.
        d) The patient was upset.
        e) There was no privacy.

13. What has been your impression of your encounter with patients?
    a) Positive
    b) Negative

7.10. Appendix 10: DATA COLLECTION FORM: MEDICAL STUDENTS IN PAEDIATRIC ROTATION

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier number: _____ (please do not complete this).

2. Age:_____

3. Gender:
   a) Male
   b) Female

4. Year of study:
   a) GEMP 3
   b) GEMP 4

5. Do you think a care-giver has a right to refuse interacting with a medical student? Yes/No.

6. How many students do you think should be allowed to be present at a bedside tutorial around a child? _____

7. How many students do you think should be allowed to examine a child during one encounter? _____

8. At what stage of your encounter with a child do you think a student should have supervision (whether intern/registrar/consultant)?
   a) During history taking? Yes/No.
   b) During examination? Yes/No.
   c) During any procedure? Yes/No.

9. At what stage of your encounter with a care-giver do you seek consent?
   a) Before you take history from a care-giver? Yes/No.
   b) Before examine a child? Yes/No.
   c) Before you perform any procedure? Yes/No.

10. How many care-givers have refused consent to let you take a history from them? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The child was already seen by too many students/healthcare professionals.
        b) The child was too tired.
        c) The child was too sick.
        d) The child was upset.
        e) There was no privacy.

11. How many care-givers have refused consent to let you examine their child? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The child was already examined by too many students/healthcare professionals.
        b) The child was too tired.
        c) The child was too sick.
        d) The child was upset.
        e) It was an intimate physical examination.
        f) There was no privacy.

12. How many care-givers have refused consent to let you perform a procedure on their child? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The procedure was already done on the patient by too many students/healthcare professionals.
        b) The child was too tired.
        c) The child was too sick.
        d) The child was upset.
        e) There was no privacy.

13. What has been your impression of your encounter with care-givers?
    a) Positive
    b) Negative

7.11. Appendix 11: DATA COLLECTION FORM: MEDICAL STUDENTS IN OBSTETRICS AND GYNAECOLOGY ROTATION

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

1. Unique participant identifier number: _____ (please do not complete this).

2. Age:_____

3. Gender:
   a) Male
   b) Female

4. Year of study:
   a) GEMP 3
   b) GEMP 4

5. Do you think a patient has a right to refuse interacting with a medical student? Yes/No.

6. How many students do you think should be allowed to be present at a bedside tutorial around a patient? _____

7. How many students do you think should be allowed to examine patient during one encounter? _____

8. At what stage of your encounter with a patient do you think a student should have supervision (whether intern/registrar/consultant)?
   a) During history taking? Yes/No.
   b) During examination? Yes/No.
   c) During any procedure? Yes/No.

9. At what stage of your encounter with a patient do you seek consent?
   a) Before you take history from a patient? Yes/No.
   b) Before examine a patient? Yes/No.
   c) Before you perform a procedure? Yes/No.

10. How many patients have refused consent to let you take a history from them? _____

a) Did you explore the reasons as to why they refused consent? Yes/No.
b) If yes, what were the possible reasons?
    a) The patient was already seen by too many students/healthcare professionals.
    b) The patient was too tired.
    c) The patient was too sick.
    d) The patient was upset.
    e) There was no privacy.

11. How many patients have refused consent to let you examine them? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The patient was already examined by too many students/healthcare professionals.
        b) The patient was too tired.
        c) The patient was too sick.
        d) The patient was upset.
        e) It was an intimate physical examination.
        f) There was no privacy.

12. How many patients have refused consent to let you perform a procedure on them? _____
    a) Did you explore the reasons as to why they refused consent? Yes/No.
    b) If yes, what were the possible reasons?
        a) The procedure was already done on the patient by too many students/healthcare professionals.
        b) The patient was too tired.
        c) The patient was too sick.
        d) The patient was upset.
        e) There was no privacy.

13. With regards to your encounter with a pregnant patient, how many patients have refused consent to interact with you? _____
    What were the possible reasons?
    a) The history was taken by too many students.
    b) The physical examination was already done by too many students/healthcare professionals.
    c) The patient was too tired.
    d) The patient was too sick.
    e) The patient was upset.
    f) There was no privacy.

14. With regards to your encounter with a mother at a delivery of her baby, how many patients have refused consent to interact with you? _____
    What were the possible reasons?
    a) The history was taken by too many students.
    b) The physical examination was already done by too many students/healthcare professionals.

c) The patient was too tired.
d) The patient was too sick.
e) The patient was upset.
f) There was no privacy.

15. What has been your impression of your encounter with patients?
a) Positive
b) Negative

7.12. Appendix 12: PARTICIPANT INFORMATION FORM

PERCEPTIONS OF PATIENTS AND MEDICAL STUDENTS TOWARDS EACH OTHER IN THE SETTING OF PATIENT CARE – A SOUTH AFRICAN PERSPECTIVE

Good Day. My name is Colin Menezes and I am conducting a study in fulfilment of my MSc Med degree requirements in the field of Bioethics and Health Law.

As part of their training to become doctors, medical students are taught how to interact with patients in a particular manner when talking to patients about the medical problems, examining or even doing a test/procedure on them.

I am inviting you to take part in this study where I want to learn more on how patients and medical students interact with each other when seeking medical care. Your interaction will help me better understand things.

What is involved in the study?

This study involves you completing a questionnaire that includes questions on your personal interaction with patients seeking medical care in the department that you are currently rotating through. I kindly request that you complete this questionnaire which will take approximately 15 minutes of your time.

There are no physical risks or benefits involved in this study. Your participation is completely voluntary, refusal to participate will not affect you in any way. You will not be reimbursed for participating in this study.

Confidentiality:

All efforts will be made to keep your information confidential. Your questionnaire has a special identifier number with no personal identifiers. Information collected may be disclosed if required by law or by the Wits Human Research Ethics Committee who has provided permission to undertake this study.

To prevent you from feeling coerced into participating in this study, an administrator will make the questionnaires available to you. In addition, a box has also been made available for you to deposit the questionnaire whether you complete the questionnaire or not.

All information obtained will be used for the development of possible patient-student guidelines and journal publications.

By completing this questionnaire, you are giving your consent to participate in this study in lieu of signing a consent form.

Contact details of researcher:
If you have any more questions, you can contact me, Professor Colin Menezes, on 011 488 3621 or 011 933 8940.

Contact details of Wits Human Research Ethics Committee:

If you have any complaints, you can contact Professor Cleaton-Jones or Ms Zanele Ndlovu at the Wits HREC on 011 717 1252 or 2700.

7.13. Appendix 13: ETHICS APPROVAL LETTER

R14/49 Prof Colin Menezes

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M1704106

NAME: (Principal Investigator)	Prof Colin Menezes
DEPARTMENT:	Internal Medicine and Steve Biko Centre for Bioethics Chris Hani Baragwanath Academic Hospital Departments of: Paediatrics, Surgery, Medicine, Obstetrics and Gynaecology
PROJECT TITLE:	The Ethics of Increasing Medical Student Numbers in a Resource Constrained Setting
DATE CONSIDERED:	05/05/2017
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Prof Ames Dhai
APPROVED BY:	Professor P Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	09/06/2017

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Research Office Secretary in Room 301, Third Floor, Faculty of Health Sciences, Phillip Tobias Building, 29 Princess of Wales Terrace, Parktown, 2193, University of the Witwatersrand. I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**. The date for annual re-certification will be one year after the date of convened meeting where the study was initially reviewed. In this case, the study was initially reviewed in April and will therefore be due in the month of April each year. Unreported changes to the application may invalidate the clearance given by the HREC (Medical).

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

7.14. Appendix 14: PERMISSION FROM FACULTY OF HEALTH SCIENCES

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

FACULTY OF HEALTH SCIENCES
OFFICE OF STUDENT SUPPORT

02 June 2017

TO: Professor Colin Menezes
Academic Head: Department of Internal Medicine
School of Clinical Medicine

Protocol No: M1704106

Dear Prof Menezes

RE: **RESEARCH PROJECT ENTITLED** – *The Ethics of Increasing Medical Student Numbers in a Resource Constrained Setting.*

I have reviewed your research protocol & questionnaire and permission is hereby granted for you to proceed with the research.

PLEASE NOTE: that permission has been granted subject to the following conditions:

1. Anonymity of participants secured and participants to take part in the study on a purely voluntary basis.
2. Consideration and approval of the proposal by the Ethics Committee.

Yours sincerely

Professor T Parbhoo
ASSISTANT DEAN (Student Support)
Faculty of Health Sciences
University of the Witwatersrand
JOHANNESBURG

The Philip Tobias Health Sciences Building, 29 Princess of Wales Street, Parktown 2193, South Africa
Private Bag 3, WITS, 2050, South Africa | **T** +27 11 717 2565 | **Telegrams** 'Witsmed' | www.wits.ac.za
IYUNIVESITHI YASEWITWATERSRAND | YUNIVESITHI YA WITWATERSRAND

7.15. Appendix 15: PERMISSION FROM INTERNAL MEDICINE

GAUTENG PROVINCE
REPUBLIC OF SOUTH AFRICA

Department of Medicine
Chris Hani Baragwanath Academic Hospital
P.O. Bertsham
2013
Tel +27 11 933 8870/2040
Fax: +27 11 933 1545

30 May 2017

Dr. J.M.L. Tsitsi
Head of Department of Internal Medicine
Chris Hani Baragwanath Academic Hospital

Dear Dr. Tsitsi

RE: PERMISSION FOR A/PROF COLIN MENEZES TO CONDUCT A MSC STUDY ENTITLED: THE ETHICS OF INCREASING MEDICAL STUDENT NUMBERS IN A RESOURCE CONSTRAINED SETTING.

I would like to request your permission and the permission of the CHBAH authorities to conduct my MSc study entitled: The ethics of increasing medical student numbers in a resource constrained setting.

Permission has been obtained for the University of the Witwatersrand Ethics Committee.

Yours sincerely

A/Prof Colin Menezes
Head: General Internal Medicine Unit
Chris Hani Baragwanath Academic Hospital

Signature of approval by Dr. J.M.L. Tsitsi ..... Date 31/05/2017

7.16. Appendix 16: PERMISSION FROM SURGERY

WITS UNIVERSITY

FACULTY OF HEALTH SCIENCES

University of the Witwatersrand, Johannesburg

Department of Surgery

7 York Road, Parktown, 2193 South Africa • Telephone (011) 717-2580 • Fax (011) 484-2717

5th June 2017

Re: PERMISSION TO CONDUCT A MSC STUDY ENTITLED: THE ETHICS OF INCREASING MEDICAL STUDENT NUMBERS IN A RESOURCE CONSTRAINED SETTING.

Dear Prof Menezes

This letter serves to give permission to use the Department of Surgery in your research

Kind regards



Professor M.D. Smith,
Academic Head, Department of Surgery,
University of the Witwatersrand, Johannesburg
Chief Surgeon and Head of General Surgery,
Chris Hani Baragwanath Academic Hospital.

FACULTY OF HEALTH SCIENCES

7.17. Appendix 17: PERMISSION FROM PAEDIATRICS

GAUTENG PROVINCE

REPUBLIC OF SOUTH AFRICA

Department Of Paediatrics
Metabolic Unit
Chris Hani Baragwanath Academic Hospital
P. O. Bertsham
2013

06 June 2017

The Research Protocol Review Committee
Chris Hani Baragwanath Academic Hospital
Soweto
Johannesburg

Dear Madam/ Sir

I would like to inform you that Professor C. Menezes has been given a permission to conduct his research study in the Department of Paediatrics at Chris Hani Baragwanath Academic Hospital. The title of his study is: **"The ethics of increasing medical student numbers in a resource constrained setting."**

While he has been given permission to conduct this study, he cannot start with data collection until he has provided the Department with Ethics Committee Clearance Certificate.

Yours Sincerely

Professor Sithembiso Velaphi
Associate Professor and Head of Department of Paediatrics
Chris Hani Baragwanath Academic Hospital

7.18. Appendix 18: PERMISSION FROM OBSTETRICS AND GYNAECOLOGY

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG

OBSTETRICS AND GYNAECOLOGY
School of Clinical Medicine

3rd June 2017

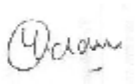
To whom it may concern

Re: Confirmation of study approval in the Department of Obstetrics & Gynaecology, Chris Hani Baragwanath Academic Hospital

Title of Study: The effects of increasing medical student numbers in a resource constrained environment

This letter serves to confirm that Prof C Menezes has approval to conduct this study in this Department. This approval is subject to unconditional approval from the Human research ethics committee and the CEO of Chris Hani Baragwanath Academic Hospital.

Thank you



Thank you
Yasmin Adam
Chief Specialist and Adjunct Professor
Department of Obstetrics & Gynaecology
The University of the Witwatersrand

Faculty of Health Sciences
Johannesburg Hospital | Private Bag X39, Johannesburg, South Africa | T +27 11 488 3179 | F +27 11 643 2528 | www.wits.ac.za

7.19. Appendix 19: PERMISSION FROM HOSPITAL

GAUTENG PROVINCE
REPUBLIC OF SOUTH AFRICA

MEDICAL ADVISORY COMMITTEE
CHRIS HANI BARAGWANATH ACADEMIC HOSPITAL

PERMISSION TO CONDUCT RESEARCH

Date: 31 May 2017

TITLE OF PROJECT: The ethics of increasing medical student numbers in a resource constrained setting

UNIVERSITY: Witwatersrand

Principal Investigator: C Menezes

Department: Medicine

Supervisor (If relevant): A Dhai

Permission Head Department (where research conducted): Yes

Date of start of proposed study: May 2017
Date of completion of data collection: Dec 2018

The Medical Advisory Committee recommends that the said research be conducted at Chris Hani Baragwanath Hospital. The CEO /management of Chris Hani Baragwanath Hospital is accordingly informed and the study is subject to:-

- Permission having been granted by the Human Research Ethics Committee of the University of the Witwatersrand.
- the Hospital will not incur extra costs as a result of the research being conducted on its patients within the hospital
- the MAC will be informed of any serious adverse events as soon as they occur
- permission is granted for the duration of the Ethics Committee approval.

.....
Recommended
(On behalf of the MAC)
Date: 31 May 2017

.....
Approved/Not Approved
Hospital Management
Date: 03/06/17

7.20. Appendix 20: ETHICS AMMENDMENT APPROVAL LETTER

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

10 October 2017

Prof Colin Menezes
Faculty of Health Sciences
Department of Internal Medicine
Chris Hani Baragwanath Academic Hospital
University of the Witwatersrand

Sent by email to: Colin.Menezes@wits.ac.za

Dear Prof Menezes

Re: **Protocol Ref no: M1704106**
Protocol Title: The Ethics of Increasing Medical Student Numbers in a Resource Constrained Setting
Principal Investigator: Prof Colin Menezes
Amendments to the Questionnaires

This letter serves to confirm that the Chairman of the Human Research Ethics Committee (Medical) has approved the protocol amendments for the abovementioned protocol, as detailed in your letter dated 01 October 2017.

The following was received:

- Cover Letter dated 01 October 2017.
- Data Collection Form: Paediatric Caregivers.
- Data Collection Form: Patients in Surgery.
- Data Collection Form: Patients in Internal Medicine.
- Data Collection Form: Patients in Obstetrics and Gynaecology.
- Data Collection Form: Medical Students in Paediatric Rotation.
- Data Collection Form: Medical Students in Surgery.
- Data Collection Form: Medical Students in Obstetrics and Gynaecology Rotation.
- Data Collection Form: Medical Students in Internal Medicine Rotation.

Research Office Secretariat: Faculty of Health Sciences, Phillip Tobias Building, 3rd Floor, Office 302, Corner York Road and 29 Princess of Wales Terrace, Parktown, 2193 Private Bag 3, Wits 2050 | T+27 (0)11-717-1234/2556/2700/1252 E Lebo.Moeng@wits.ac.za | Office E HREC-MedicalResearchOffice@wits.ac.za | Website: www.wrhi.ac.za/research/about-our-research/ethics-and-research-integrity/

7.21. Appendix 21: PILOT RESULTS

- Only 8/12 patients were aware that they were admitted to a teaching hospital, of which 10/12 of them knew that they were likely to encounter medical students.

- Only 5/12 patients were ware that they had a right to refuse interacting with medical students. All the 8 students agreed that patients had the right to refuse interacting with them.

- With regards to the number of students at a bedside tutorial, three patients felt that they handle 1-3 students at a bedside tutorial, whilst five patients were happy with 4-8 students and four patients with 9 or more. Almost all but one student were happy with 4-8 students at a bedside tutorial. A total of 8/12 patients and 6/8 students were happy with 1-3 student encounters per day.

- In terms of supervision, 4/12 patients wanted a supervisor to be present during history taking and a physical examination whilst 9/12 wanted one to be present during a procedure. On the other hand, 1/7 students wanted a supervisor to be present during history taking and a physical examination whilst 5/8 wanted one to be present during a procedure.

- All the patients wanted the students to ask for consent when taking a history, but 10/12 patients wanted the same for physical examination and 11/12 patients for a procedure. All the students thought that consent should be sought for history taking, a physical examination and a procedure.

- None of the 12 patients interviewed reported refusing consent for history taking, a physical examination and a procedure in all the four departments, including during an interaction during a pregnancy or delivery of a child.

- On the other hand, with regards to students reporting that patients refusing consent during history taking – one student reported having between 1-3 patients, two students reported having between 4-8 patients, and one student reported having more 9 patients denying consent.

- In terms of patients refusing consent during physical examination, six students reported having between 1-3 patients, and one student reported having between 4-8 patients denying consent.

- Two students reported between 1-3 patients refusing consent during a procedure and one student reported more 9 patients refusing consent during a procedure.

- None of the eight students were refused consent when it came to a delivery of a child but only two students responded to the question on their interaction during a pregnancy and they reported that they were not turned down consent.

- Students listed more than one reason for refusal of consent by patients for history taking included “seen by too many students” (4) and “being too tried” (2) and “being upset” (1). The reasons given by students for refusal of consent by patients for physical examination included “seen by too many students” (5), “being upset” (2) and “being too tried” (1). Whilst the reasons given by students for refusal of consent by patients for procedure included seen by too many students” (3), “being too sick” (1) and “no privacy” (1).

7.22. Appendix 22: COMMUNICATION TO THE HEALTH PROFESSIONS COUNCIL OF SOUTH AFRICA WITH RESPONSE

From: Raymond Billa
To: Colin Menezes
Cc: Munyadziwa Kwinda; Kurhula Mudiuli; Precious Moyo; MDBboard; Ames Dhai
Subject: RE: The ethics of increasing medical student numbers in a resource constrained setting.
Date: 30 July 2019 02:04:40 PM
Attachments: image001.png
image002.png
image003.png

Dear Prof. Menezes

Thank you for sharing observations from your study regarding the training institutions. I will make sure that the matter serves at the right committee and all other engagements with relevant stakeholders are held. This is a very important study and I am certain it will help us as a Council and the training platforms to have a rethink on how these institutions manage patients presenting for health care services there.

Regards

Ray

Dr MR Billa
Registrar/CEO
Office of the Registrar
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Please send complaints or compliments to servicedelivery@hpcsa.co.za



From: Colin Menezes <Colin.Menezes@wits.ac.za>
Sent: Tuesday, 30 July 2019 05:19
To: Raymond Billa <Raymondb@hpcsa.co.za>; MDBboard <MDBboard@hpcsa.co.za>; Ames Dhai <Ames.Dhai@wits.ac.za>

Subject: The ethics of increasing medical student numbers in a resource constrained setting.

Dear Dr Billa,

I write this letter in my capacity as an MSc student in degree of Bioethics and Health Law under the supervision of Prof Ames Dhai, the Director of Steve Biko Centre for Bioethics at the University of Witwatersrand.

While I understand there is an urgency to increase the number of doctors in South Africa, the rights of patients in medical education need to be accommodated, including an optimum student to patient ratio supported by evidence. I have recently completed a study that provides information on the perception of patients and students towards each other.

Some sections of the Constitution, National Health Act (NHA) and the Patients' Rights Charter advocate for access to healthcare. The State's ethical obligations conflict with its utilitarian policy attempts that allow for medical education to achieve healthcare at the cost of violating patients' rights and accepts that certain actions are imperative to achieve a better healthcare system, in line with the spirit of Ubuntu. On the other hand, Principlism and Kantism, together with the Constitution and NHA focus on maintaining patients' autonomy, right to privacy and dignity, informed consent and confidentiality whether they accept or refuse healthcare choices. The roles of students are not formally discussed in these legal documents.

In my empirical study, I interviewed 118 patients, and 120 students were invited to complete a self-administered questionnaire. These participants were approached from four departments - Surgery, Internal Medicine, Obstetrics & Gynaecology and Paediatrics. I found that a third of patients were unaware they were admitted to a teaching hospital and half of them were unaware of their right to refuse interaction with students. The majority of patients and students preferred smaller groups of no more than eight students per tutorial. Most patients wanted supervision at an encounter. Furthermore, while the majority of patients said they never refused consent to students, a third of students said at least up to three patients refused consent to be examined by them. The common reason cited by students for refusal of consent by patients was the interaction with excessive numbers of students and healthcare professionals.

Patients need to be educated on the importance of their role in medical education. Institutions need to take cognisance of numbers of students that patients can tolerate. My work highlights the need for formal guidelines on the student-patient interaction including student to patient ratios by the HPCSA. This will allow for uniformity across the country in the medical curriculum in terms of professionalism on the training platform where medical students learn their clinical skills– see attached document.

The South African National Department of Health and public sector training hospitals do not have any guidelines on definition of a teaching institution except for the term "Academic" in their hospital's name. This may be a problem should a patient not know what this means especially if there is a language barrier. Therefore, there is a need for a patient information form explaining what an "academic" hospital is, the importance of training of medical students and what a patient should expect in a clinical encounter with medical students. I have drawn up a document to reflect this as part of my study – see attached document.

I will appreciate it if this matter is discussed with the Human Rights, Ethics and Professional Practice Committee and the South African Committee of Medical Deans.

Regards,

Colin Menezes

7.23. Appendix 23: COMMUNICATION TO THE SOUTH AFRICAN COMMITTEE OF MEDICAL DEANS WITH RESPONSE

From: Martin Veller
To: Colin Menezes; Ames Dhai
Cc: Poovy Govender
Subject: RE: The ethics of increasing medical student numbers in a resource constrained setting.
Date: 30 July 2019 08:21:09 AM

Dear Colin

Keen to discuss, ideally also with Ames. Very cognisant of this but also do not think that we have explored all solutions.

Regards
Martin Veller
Dean
Faculty of Health Sciences
University of the Witwatersrand

Tel: +27 11 717 2555

From: Colin Menezes <Colin.Menezes@wits.ac.za>
Sent: 30 July 2019 05:21
To: Martin Veller <Martin.Veller@wits.ac.za>; Ames Dhai <Ames.Dhai@wits.ac.za>
Subject: The ethics of increasing medical student numbers in a resource constrained setting.

Dear Prof Veller,

I write this letter in my capacity as an MSc student in degree of Bioethics and Health Law under the supervision of Prof Ames Dhai, the Director of Steve Biko Centre for Bioethics at the University of Witwatersrand.

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I will appreciate it if this matter is discussed and taken further with the National and the respective Provisional Departments of Health, and the Health Professionals Council of South Africa.

Regards,

Colin Menezes