BIOETHICAL PRINCIPLES AND PROFESSIONALISM FOR SOUTH AFRICAN MEDICAL LABORATORY TECHNOLOGISTS

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ABSTRACT
As allied healthcare professionals, medical laboratory technologists are an integral part of the healthcare team, tasked with carrying out essential technical and scientific services in the laboratory. These key technical and scientific resources aid the pathologist and/or clinician in attaining an accurate diagnosis and hence providing the appropriate treatment. In South Africa, pathology services represent an integral part of the clinical consultation and most healthcare diagnosis and treatment involves these services, which are thus fundamental to current healthcare practices. Medical laboratory technologists practice their profession guided by ethical codes and high ethical standards are expected of them. This manuscript explains the four principles of bioethics as they apply to the profession of medical laboratory technology and describes the principles of professionalism for medical laboratory technologists in regard to the social responsibility and the importance of the professional and also the moral contract between society and the profession.

KEYWORDS
respect for autonomy, beneficence, non-maleficence, justice

INTRODUCTION
The birth of medical ethics dates back to 460-377 B.C, with the Greek physician Hippocrates and to the teachings of a distinctive medical group known as the Hippocratics[1]. These ethical teachings have been passed down through generations in the form of the Hippocratic Oath[1]. Today, a modernised version of the Hippocratic Oath is the World Medical Association Declaration of Geneva adopted in 1948, but the chief ethical principle remains unchanged, namely “the health of my patient will be my first consideration”[2].

Contemporary healthcare ethics has been greatly influenced by the four-principled approach to bioethics introduced in 1994 by Thomas Beauchamp and James Childress[3]. The four principles are respect for autonomy, beneficence, non-maleficence and justice and these were intended to offer a platform for ethical practice and for guiding the behaviours of healthcare professionals[4]. All of these four principles are "prima facie" principles, a term coined by the philosopher Sir William Ross in the twentieth century, which necessitates that they are binding and must be fulfilled, unless they are in conflict with an equivalent or stronger principle[4, 5]. In case there is a conflict between "prima facie" principles, a choice must be made regarding which principle holds a greater significance[4]. According to this bioethical approach, a healthcare practitioner’s moral responsibility towards his or her patient can be summarised in essence by these four principles.

Even though medical laboratory technologists (MLTs) do not normally have direct contact with the patient, the ethical principles that they are required to adhere to, stem from medical ethics. That is, their foremost duty still being that of “providing care and service to the patient, above all other considerations”[6].

THE FOUR PRINCIPLES AS THEY APPLY TO THE PROFESSION OF MEDICAL TECHNOLOGY

RESPECT FOR AUTONOMY
Respect for autonomy includes respect for “self-governance, liberty rights, privacy, individual choice and the liberty to allow ones will, causing one’s own behaviour, and being one’s own person”[5, 6]. In the healthcare context, respect for autonomy is widely correlated with enabling competent patients to make their own informed decisions regarding the consent and/or refusal of medical interventions[7]. This principle also extends to issues of confidentiality and privacy[7].

In the context of laboratory practice, all procedures including laboratory testing may only be carried out after obtaining informed consent from the patient and, where possible MLTs should ascertain whether the informed consent process has been applied. Imposing medical procedures or tests on patients is not only ethically unacceptable, but represents an invasion of privacy and a violation of that individuals human rights[8].

Privacy and confidentiality are important aspects in laboratory testing in terms of respecting the principle of autonomy, by allowing patients to have autonomy over their private information[9]. The notions of privacy and confidentiality are interrelated and are often discussed collectively; however some differences do exist between them[9]. The former refers to private information about an individual, which no one else is entitled access to, while the latter refers to that private information that is divulged to the healthcare practitioner for adequate medical treatment and hence necessitates a relationship between the patient and the healthcare practitioner based on trust[9].

The right to privacy and confidentiality are entrenched in the
Constitution of the Republic of South Africa, which states that “everyone has the right to privacy, which includes not having the privacy of their communications infringed”[17]. Correspondingly, the National Health Act states that “all information concerning healthcare users, including information regarding their health status, treatment or stay in a healthcare establishment should be kept confidential”[10]. A violation in confidentiality by healthcare practitioners would infringe on the patient’s right to privacy[4].

Confidential information is regarded as sensitive information for the patient, which could be detrimental or embarrassing for the patient[4]. Confidentiality ensures that such delicate information is safeguarded[6]. In order to protect the patient’s right to confidentiality, all laboratory results should be kept confidential unless disclosure is legally required and authorised[11]. Disclosure of information regarding a patient may only be allowed under the following circumstances:

- “In terms of a Statutory provision”, “At the instruction of a court”,
- “In the public interest”,
- “With the express consent of the patient”,
- “With the written consent of a parent or guardian of a minor under the age of 12 years”,
- “In the case of a deceased patient with the written consent of the next of kin or the executor of the deceased’s estate”[11].

Private information is collected for the purpose of identification of the patient and any other information that is required for carrying out the requested laboratory procedures[12]. The principle of respect for autonomy dictates that collection of unnecessary private information is not ethically justifiable[13].

BEFICIENCE AND NON-MALEFICENCE

Although these two principles are considered separately in the principled based approach, it is helpful to discuss them collectively as they are interconnected. These two principles stem from the original Hippocratic moral commitment to maximise benefits for patients while minimising harm[4]. These two principles are directly linked to the principle of autonomy, because, in order to maximise benefits and minimise harm, the patient must decide what constitutes benefit and what constitutes harm for his or her individual case.

The principle of beneficence can be defined as an “action that is done for the benefit of others”[13]. In the healthcare context this principle implies that the main duty of healthcare practitioners is to always serve in the best interest of their patient by maximising benefits. Due to the importance of laboratory testing in verifying or excluding pathology, as well as the importance of these tests in scientific research, all MLTs should ensure that the laboratory procedures they perform are precise, reliable, validated and reproducible[14]. This includes, amongst others, adequate maintenance and calibration of equipment, as well as secure archiving of patient samples to allow for pathological prognostics and subsequent tracking of pathology.

The principle of non-maleficence can be defined as “do no harm” which includes injury, injustice and violations of an individual’s rights[13]. As stated by the Health Professions Council of South Africa (HPCSA), “health care practitioners should not harm or act against the best interests of patients, even when the interests of the latter conflict with their own self-interest”[13]. MLTs can respect this principle by, ensuring that all technological and scientific procedures are done in a way to minimise the risk of incorrect diagnosis. This can be achieved by reporting any errors and dealing with them swiftly in order to ensure that the quality of the diagnosis and ultimately the quality of the treatment is not adversely affected. This includes preventing unnecessary delays to laboratory procedures and following appropriate laboratory protocols to prevent cross-labeling of specimens and taking accurate inventories in order to prevent a technique from not being executed due to, for example the lack of consumables.

Lastly, continued professional development (CPD) is essential for MLTs in maintaining and improving technical training, updating competency levels and staying up-to-date with technological advancements[13]. Part of CPD should focus on medical ethics which will emphasise the moral obligation towards patients, the professions and to society at large[16]. Through continued professional and ethical development, the two principles of beneficence and non-maleficence can be continuously and effectively weighed against each other in order to bring about the maximum benefit for patients with minimum harm in respect to laboratory procedures.

JUSTICE

Justice can be defined as “the quality of being fair and reasonable”[17]. The HPCSA considers the principle of justice as “an ethical obligation to treat each person in accordance with what is right and proper”[18]. In healthcare, the principle of justice is equated to fairness and integrity and on the “moral obligation to act on the basis of fair adjudication between competing claims”[15, 13].

In the context of laboratory practice, resources required for performing the necessary laboratory procedures for diagnostic purposes should be distributed fairly and without discrimination for all patients. This distribution should be done equitably, irrespective of “race, culture, ethnicity, social status, lifestyle, perceived economic worth, age, gender, disability, communicable disease status, sexual orientation, religious or spiritual beliefs, or any condition of vulnerability such as contained in health rights legislation”[15].

PROFESSIONALISM IN HEALTHCARE

Health care practice is regarded as the moral contract between society and the profession[4]. Professionalism is fundamental to this moral contract as it sets the values and standards that patients can expect the profession[4]. A profession can be defined as a “dedication, promise or commitment” which is affirmed publicly[19]. A healthcare profession is considered as “an occupation that is characterised by high moral standards, including a strong commitment to the well-being of others, mastery of a body of knowledge and skills, and a high level of autonomy”[13]. This commitment to the welfare of others is reinforced by a social contract between the profession and society, which implies that particular obligations and expectations must be met by all parties of the contract[13].

MLTs have been granted the privilege to practice their profession under the auspices of the HPCSA[13]. This privilege is underpinned by the duties that MLTs have towards their patients, the profession and towards the society at large.

Duties to patients

Even though MLTs do not generally have direct contact with the patient, they do have access to private and sometimes sensitive information about the patient[16]. MLTs need to be cognisant of the fact that patients expect that healthcare practitioners will not divulge private and sensitive information that MLTs request
in order to carry out certain laboratory procedures\textsuperscript{[11]}. MLTs are as a consequence, required to honour the trust that patients have granted them and ensure that their own beliefs do not prejudice their patient's well-being\textsuperscript{[11]}. MLTs furthermore have the duty to perform all technological procedures to the highest possible accuracy and ethical standards in order to always act in the best interest of the patient.

**Duties to the profession**

MLTs are entrusted with setting and maintaining high standards of training, research and practice in the field of medical laboratory technology which directly impacts on the standards of practice that pathologists and/or clinicians are able to offer their patients\textsuperscript{[12]}. MLTs have an important responsibility in sustaining the respect of the profession and should strive to create positive and respectful working partnerships with associated health care practitioners\textsuperscript{[13]}.

**Duties to society**

Professionalism in the healthcare setting, including the laboratory setting, should be viewed as the moral contract and duty that links the profession with the society and indeed all the stakeholders that it serves. Healthcare practitioners, including MLTs have a duty to uphold the trust that society has granted the profession and are required to contribute to the overall welfare of the community as a whole\textsuperscript{[13]}. Furthermore, all efforts should be made to avoid providing an unnecessary service whether or not financial gain is involved and ensuring that no unnecessary wastage takes place to the disadvantage of the community\textsuperscript{[13]}. 

**Duties to the environment**

All healthcare professionals have a duty protect the environment\textsuperscript{[22]}. Part of this duty lies in the adequate disposal of hazardous healthcare waste. The following are considered as hazardous healthcare waste:

- "Infectious waste",
- "Pathological waste, including body fluids, secretions and surgical specimens",
- "Sharps, especially contaminated sharps",
- "Pharmaceutical waste",
- "Chemical waste",
- "Heavy metals",
- "Radioactive waste",
- "Genotoxic waste",
- "Cytotoxic agents",
- "Pressurised containers"\textsuperscript{[22]}. 

Unsafe disposal of hazardous healthcare waste may increase the risk of transmission of infectious diseases and expose the community to unwarranted harm\textsuperscript{[22]}. It is the duty of MLTs to ensure that a proper waste management system is in place in their laboratories and to verify that this system is in accordance with current national legislation\textsuperscript{[22]}.

**VIRTUE BASED ETHICS**

MLTs are important representatives of a healthcare team that contribute through technical and scientific expertise. However, their duties should also extend beyond just technical expertise and ought to encompass professional integrity and morality. Society views healthcare practitioners as moral agents that ought to be virtuous and good, as part of the moral contract between society and the profession\textsuperscript{[14]}. MLTs, like all healthcare practitioners should strive to pursue not only technical excellence, but also virtuous qualities such as compassion, discernment, trustworthiness, integrity and conscientiousness\textsuperscript{[8, 14]}. Correspondingly, all healthcare practitioners, including MLTs should "strive to avoid vice and immoral action"\textsuperscript{[14]}. A virtue based approach to the profession provides MLTs with a useful guide for dealing with ethical issues and facilitates ethical practice\textsuperscript{[14]}.

**CONCLUSION**

Medical ethics serves to ensure that the trust that society has bestowed on the profession is upheld. Society's expectations of ethical standards of medical laboratories are equivalent to the expectations from the medical profession at large. Hence the weight of the responsibility of maintaining trust in the medical profession weighs equally on MLTs as it does on other healthcare professionals.

The best interest of patients lies at the heart of the profession and MLTs should always strive to apply the four principles of bioethics in working together with other healthcare professionals to achieve optimal laboratory techniques and hence optimal health for patients and the community at large.

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**CONFLICT OF INTEREST**

The author has no conflict of interest to declare.

**REFERENCES**


IMPORTANT INFORMATION

DEAR MTSA JOURNAL SUBSCRIBERS AND READERS (ISSN 1011 5528)

It was with great shock and sadness that the profession of Medical Technology in South Africa lost one of our most active and respected Medical Technologists, at the untimely passing, in August 2014, of the late Professor Johan Esterhuyse, the MTSA Journal’s Editor in Chief. The passing of this gentle man, who was the epitome of exemplary professionalism, left the profession reeling with the realisation of all the areas that he was involved in and therefore the amount of work required to carry on the legacies he left behind.

Unfortunately, the Assistant Editor-in-Chief had resigned some months before the passing of Professor Esterhuyse and had not been replaced. This left a void in the operations of the MTSA Journal from which it has taken the profession a year to recover.

The SMLTSA apologises to all who have eagerly awaited the two issues of December 2014 (Vol 28 No 2 (2014)) and June 2015 (Vol 29 No 1 (2015)). We also thank the authors, who submitted articles for peer review and publication for their patience and understanding. Therefore please note that these issues will not be published.

The new era of the MTSA Journal began during 2015 with the hard work of our Editor-in-Chief, Warren Maule, and Assistant Editor-in-Chief, Dr Glenda Davison, as well as our new Editorial Board and Peer Reviewers. The first edition going forward is Vol 29 No 2 (2015) which we hope you will enjoy.

The team, together with our Advertising, Design and Layout expert, Karen Adamson, look forward to compiling the next edition for June 2016 (Vol 30 No 1 (2016)).

With very best wishes

Jenny Hind

SMLTSA Head Office Administrator