

UNIDENTIFIED BODIES IN FORENSIC PATHOLOGY PRACTICE IN SOUTH AFRICA

Demographic and Medico-Legal Perspectives

by

Lucinda Evert

Student Nr. 23070618

**Supervisor: Dr. S.H. Rossouw
Department of Forensic Medicine
University of Pretoria**

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DECLARATION

I declare that the dissertation, which I hereby submit for the degree **Magister Scientiae** in **Medical Criminalistics** at the University of Pretoria, is my own work and has not been previously submitted by me for a degree at this or any other tertiary institution.

Lucinda Evert

Date: _____



TABLE OF CONTENTS

Acknowledgements.....	p. i
Abstract.....	p. ii
Opsomming.....	p. iv
Abbreviations	p. vi
List of figures.....	p. vii

Chapter 1: Background and Study Objectives

1.1 Introduction	p. 1
1.2 Literature Review	p. 9
1.3 Process of Identification at Medico-Legal Laboratory Facilities	p. 11
1.4 Process of DNA Identification	p. 15
1.5 Unidentified bodies in the global setting.....	p. 16
1.6 Implications of unidentified bodies	p. 19
1.7 Aims of Study	p. 22

Chapter 2: Methodology

2.1 Study design	p. 23
2.2 Subject selection	p. 23
2.3 Research procedure.....	p. 23
2.4 Ethical considerations	p. 25
2.5 Data and documentation	p. 26
2.6 Funding	p. 27
2.7 Time frame	p. 27
2.8 Reporting.....	p. 27

Chapter 3: Results

3.	Results	p. 29
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Chapter 4: Discussion

4.1	Management of unidentified bodies in the global arena.....	p. 47
4.2	Management of unidentified bodies in South Africa	p. 54

Chapter 5: Recommendations

5.1	Establish the true nature of the problem	p. 56
5.2	Draft and implement new legislation	p. 57
5.3	Establish specific protocols	p. 60
5.4	Implementation of Death Investigators.....	p. 62
5.5	Creation of an Unidentified Decedent Database.....	p. 64
5.6	Creation of a National DNA database	p. 73
5.7	Cooperation at international level.....	p. 76

Chapter 6: Conclusion

6.	Conclusion	p. 78
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References	p. 80
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ABSTRACT

Unidentified bodies in the forensic setting constitute a global problem. Though this should be of great concern to many governments, very little data on the extent of this phenomenon is available in international literature and few countries require that statistics on the number of unidentified deceased be kept.

To determine the extent of this phenomenon in South Africa, a study into the number of unidentified deceased at the Pretoria Medico-Legal Laboratory and their demographic profile was undertaken. The study has indicated that between 7% and 10% of bodies remain unidentified at the Medico-Legal Laboratory in Pretoria. Publications further indicate that a total of 846 bodies remained unidentified at Medico-Legal Laboratories in Gauteng for the period January 2010 to August 2010.

This number is very high when compared to international literature. Of great concern is the fact that these statistics do not include the cases in which persons die in hospital facilities from natural causes without an identity, which are not referred to the Forensic Pathology Service for investigation. The true extent of the problem may thus be far greater than imagined.

Determining the true extent of this phenomenon in South Africa is therefore important, as these unidentified bodies have many social and economic consequences. Not only are families unaware that their loved ones have passed away, but they are also unable to bury and mourn them.

Unidentified bodies at Medico-Legal Laboratory facilities also impacts on the service delivery capability of the government departments involved in the investigation of such cases. The drafting of additional legislation for the management of unidentified bodies is therefore required.

A need to establish and enforce specific protocols to be followed in the event of unidentified bodies has also been identified. The creation of a National Unidentified Decedent website and DNA database is recommended as they will greatly assist in reducing the number of unidentified bodies throughout South Africa.

It is however only through coordinated efforts and interdepartmental cooperation that these proposals will be successful.

OPSOMMING

Ongeïdentifiseerde liggame in die forensiese omgewing is 'n wêreldwye probleem. Alhoewel dit 'n bron van kommer vir meeste regerings behoort te wees, is baie min data oor die omvang van hierdie verskynsel beskikbaar in die internasionale literatuur, met min lande wat vereis dat amptelike statistieke oor onbekende oorledenes versamel word.

Om die omvang van hierdie verskynsel in Suid Afrika te bepaal, is 'n studie na die aantal onbekende liggame by die Regsgeneeskundige Laboratorium in Pretoria en hul demografies profiel onderneem . Die studie het getoon dat tussen 7% en 10% van alle liggame wat deur die Regsgeneeskundige Laboratorium in Pretoria opgeneem word, onuitgeken bly. Publikasies dui ook aan dat 846 liggame ongeïdentifiseerd was by Regsgeneeskundige Laboratoriums vir die tydperk Januarie 2010 to Augustus 2010.

Hierdie getal is aansienlik hoër as die wat in die internasionale literatuur gesien word. 'n Groot bron van kommer is die feit dat hierdie statistieke nie gevalle insluit waar die oorledene in 'n hospitaal gesterf het as gevolg van natuurlike oorsake, sonder dat hul identiteit bekend is. Die ware omvang van die probleem kan dus veel groter as geskat wees.

Die bepaling van die omvang van hierdie verskynsel in Suid Afrika is belangrik, omdat ongeïdentifiseerde liggame beide sosiale en ekonomiese gevolge het. Nie net is families onbewus daarvan dat hul geliefdes gesterf het nie, maar kry hul ook nie die geleentheid om hul geliefdes te begrawe en oor hul afsterwe te rou nie.

Ongeïdentifiseerde liggame by Regsgeneeskundige Laboratoriums het ook 'n invloed op die dienslewingskapasiteit van die verskeie staatsdepartemente wat betrokke is by die ondersoek van sulke gevalle. Die opstel van addisionele wetgewing wat die bestuur van ongeïdentifiseerde liggame reguleer is dus nodig.

Die behoefte aan spesifieke protokolle vir die hantering van sulke gevalle is ook geïdentifiseer. Daar word verder aangeraai dat 'n Nasionale Onuitgekende Liggaam webwerf en DNS databasis geskep word in 'n poging om die aantal ongeïdentifiseerde liggame in Suid Afrika te verminder.

Dit is egter slegs deur middel van gekoördineerde pogings en interdepartementele samewerking wat hierdie voorstelle sukses sal behaal.

ABBREVIATIONS

WHO:	World Health Organisation
AIDS:	Acquired Immunodeficiency Syndrome
DHA:	Department of Home Affairs
FPS:	Forensic Pathology Service
SAPS:	South African Police Service
LCRC:	Local Criminal Record Centre
FSL:	Forensic Science Laboratory
NCIC:	National Crime Information Centre
FBI:	Federal Bureau of Investigation
UDRS:	Unidentified Decedent Reporting System
NamUS:	National Missing and Unidentified Persons System
STR:	Short Tandem Repeats
mtDNA:	Mitochondrial DNA
ICRC:	International Committee of the Red Cross
NDDSA:	National DNA Database of South Africa
AFIS:	Automated Fingerprint Identification System

LIST OF FIGURES

<u>Figure 1:</u>	<i>Process of identification at Medico-Legal Laboratory Facilities.....</i>	<i>p. 14</i>
<u>Figure 2:</u>	<i>Percentage of unidentified bodies compared to total case load.....</i>	<i>p. 29</i>
<u>Figure 3:</u>	<i>Number of unidentified bodies per year.....</i>	<i>p. 30</i>
<u>Figure 4:</u>	<i>Age category division.....</i>	<i>p. 30</i>
<u>Figure 5:</u>	<i>Age distribution by 5 year age group.....</i>	<i>p. 31</i>
<u>Figure 6:</u>	<i>Gender distribution.....</i>	<i>p. 31</i>
<u>Figure 7:</u>	<i>Distribution of unidentified bodies according to race.....</i>	<i>p. 32</i>
<u>Figure 8:</u>	<i>Scene of injury distribution.....</i>	<i>p. 33</i>
<u>Figure 9:</u>	<i>Medical treatment administered.....</i>	<i>p. 33</i>
<u>Figure 10:</u>	<i>Cause of death distribution.....</i>	<i>p. 34</i>
<u>Figure 11:</u>	<i>Distribution of manner of death.....</i>	<i>p. 35</i>
<u>Figure 12:</u>	<i>Special investigations performed.....</i>	<i>p. 36</i>
<u>Figure 13:</u>	<i>Number of special investigations performed in each case.....</i>	<i>p. 36</i>
<u>Figure 14:</u>	<i>Fingerprint analysis distribution.....</i>	<i>p. 37</i>
<u>Figure 15:</u>	<i>Reason no fingerprints could be recorded.....</i>	<i>p. 37</i>
<u>Figure 16:</u>	<i>DNA specimen retained.....</i>	<i>p. 38</i>
<u>Figure 17:</u>	<i>Identifying features recorded in post mortem report.....</i>	<i>p. 39</i>
<u>Figure 18:</u>	<i>Number of identifying features recorded.....</i>	<i>p. 40</i>

Figure 19: *Factors which may preclude identification..... p. 41*

Figure 20: *Thumb print recorded on Notification of Death Form (BI-1663)..... p. 41*

Figure 21: *Period unidentified body kept at Medico-Legal Laboratory..... p. 42*

Figure 22: *Method of disposal of body..... p. 43*

Figure 23: *Demographics screen of the Unidentified Decedent Reporting System... p. 49*

Figure 24: *Search criteria of the Unidentified Decedent Reporting System..... p. 49*

Chapter 1

BACKGROUND AND STUDY OBJECTIVES

1.1 Introduction

South Africa has its own unique and specific circumstances which contribute to death in this country. Any study describing aspects which affect the population cannot be undertaken without knowledge of the demographics of the country and the specific problems faced by it.

The current South African population is estimated at 50.5 million people¹, encompassing many races and cultures which coexist within the country. Although some races in South African are subdivided into different indigenous groups, the classification of race in population statistics is divided into four main categories. The majority of the South African population are of African descent (79.5%), followed by Coloured and White people (both 9%), with Indian and Asian people representing a minority in the population (2.5%)¹.

The 50.5 million people living in South Africa are dispersed amongst the country's nine provinces, with 11 328 203 people living within the Gauteng province¹, thus making it the province with the second largest populace in the country. The racial representation within the Gauteng province corresponds with the racial composition of the general population, but does show that the province contains a slightly higher number of men than woman².

This may be attributed to the fact that many men move to urban areas in pursuit of employment which is more readily available within the city. This is also reflected by the fact that the majority of people living in Gauteng are between the ages of 20 and 44, indicating that there is a migration of working age adults into the province in order to seek employment².

The South African population is however also increased by the number of refugees and illegal immigrants within the country. South Africa received more than 207 000 individual applications for asylum in 2008 and a further 222 300 in 2009³. These applications do not however include the number of illegal immigrants within the country. It is estimated that there are between three and six million undocumented immigrants in South Africa⁴. As part of the population they also contribute to the death rate observed in the country and may represent a large proportion of the unidentified bodies admitted to Medico-Legal Laboratory facilities in South Africa.

The high death rate as seen in South Africa cannot be attributed to unnatural causes alone, as an increase in the natural death rate over the past few years is also observed⁵. Factors which contribute to the increased natural death rate include deaths due to HIV⁵⁻⁹ and tuberculosis^{5,9}, with a substantial proportion of the population still succumbing to these diseases each year because they do not have access to adequate medical care.

According to the UNAIDS/WHO, AIDS is the leading cause of death in Sub-Saharan Africa¹⁰. It has been estimated that approximately 336 000 South Africans died from AIDS between mid-2005 and mid-2006 and that it was responsible for 71% of all deaths among adults aged 15-49^{11,12}. It is said that more than 800 people die from AIDS in South Africa every day¹¹. Considering the fact that South Africa is the country with the largest number of HIV infections in the world, this is not surprising¹⁰.

The violent climate in South Africa also contributes to the increase in the overall mortality. It is alleged that South Africa has one of the highest incidences of unnatural deaths in the world, second only to Columbia¹³. Factors that contribute to the high incidence of deaths include the high rate of violent crime¹⁴, the ready availability of illegal firearms and ammunition¹⁵, and the large number of motor vehicle related deaths¹⁶.

Of the 592 073 deaths recorded and registered at the Department of Home Affairs (DHA) in 2008, 91.9% were attributed to natural causes, with 8.9% of deaths in the country caused by non-natural causes⁵. These statistics however only cover those deaths recorded through the civil registrations system in South Africa, as maintained by the Department of Home Affairs. There are however many instances in which death may have occurred with no official record of the death being registered with the Department of Home Affairs. This may be particularly common in the rural areas of South Africa where a person may die and no family are available to register such a death.

All non-natural deaths fall within the domain of the Forensic Pathology Service (FPS) who is responsible for investigating such cases. Of the 52 950 instances of non-natural deaths reported in 2008, only 50 808 autopsy examinations were conducted⁵. Autopsy investigations in South Africa are legislated by the Inquests Act (Act no. 58 of 1959)¹⁷ which provides for the holding of inquests in cases of deaths or alleged deaths apparently occurring from other than natural causes and for matters incidental thereto. These investigations take place at one of the many Medico-Legal Laboratory facilities that fall under the Forensic Pathology Service.

The Forensic Pathology Service in South Africa's primary objective is the rendering of a medico-legal investigation of death service that serves the judicial process¹⁷. Although this function was initially performed by and fell under the jurisdiction of the South African Police Service (SAPS), in 2006 the operational management of the Medico-Legal Laboratory facilities were transferred to the Provincial Departments of Health to form the Forensic Pathology Service as it is known today. During this transition a need was identified for the implementation of a national code in order to guide Medico-Legal Laboratory facilities in the performance of their duties. Thus the Regulations Regarding the Rendering of Forensic Pathology Service in South Africa was drafted and implemented in order to manage all cases in which death is believed to have occurred due to other than natural causes.

According to the Regulations Regarding the Rendering of Forensic Pathology Service in South Africa¹⁸, an other than natural death is defined as any death:

- (i) due to physical or chemical influence, direct or indirect, or related complications;
- (ii) that has been the result of an act of commission or omission which may be criminal in nature;
- (iii) where death is sudden and unexpected, or unexplained, or where the cause of death is not apparent; as well as
- (iv) any death whilst under the influence of a local or general anaesthetic.

These deaths are referred to the Forensic Pathology Service for investigation. Included in this category are suicides, homicides and accidental deaths, as well as any death in which the demise of the individual cannot be explained. The purpose of such an inquest is:

- (i) to establish the identity of the deceased;
- (ii) determine the cause of death;
- (iii) ascertain the date of death; and
- (iv) to determine whether the death was due to an act of omission or commission¹⁷.

Some of these bodies referred to the Forensic Pathology Service for investigation are received without a preliminary identity being available. This is particularly common in cases of the homeless and victims of crime. Of the approximately 116 000 people that die in Gauteng each year⁵, the Medico-Legal Laboratory in Pretoria handles almost 3000 bodies per year, with about 300 (10%) of these remaining unidentified¹⁹.

It is important to understand that unidentified bodies – no matter where and who they are – have consequences for society, which is profoundly affected on many levels. These effects extend not only to the deceased's family, but also to the local government authorities who are tasked with handling these cases, as well as to the law and legal system.

William E. Gladstone, Prime Minister of England from 1892-1894 said:

“Show me the manner in which a nation or community cares for its dead and I will measure, with mathematical exactness, the tender mercies of its people, their respect for the law of the land and their loyalties to high ideals.”

Thus, all civilized countries have legal frameworks and dedicated systems providing for the medico-legal investigation of deaths.

The identification of cadavers is a key issue in any forensic investigation, but is equally important for ethical, criminal and civil reasons. All human beings have the right to bury and mourn their loved ones, and without identification of a cadaver there are many civil procedures which cannot be completed²⁰. Conclusion of a post mortem examination requires that the body be identified, so that a death certificate may be issued. This death certificate in turn facilitates the funeral arrangements, burial or cremation of the individual, life insurance benefits, disposition of instructions in the decedent's last will and testament, and matters of inheritance.

However, identifying an unknown deceased individual is often problematic. As in many other countries, comparative data needed in order to make a positive identification is limited in South Africa. It is not a rare circumstance to have to identify a person where there is little ante mortem data, as in the case of illegal immigrants. In the absence of medical and dental records especially in the disadvantaged, rural populations of South Africa identification of an unknown body is often not an easy process²¹. Furthermore, identifying an extremely burned, decomposed, or even mummified body could take several days or weeks to accomplish, if at all.

The fact that a large number of unclaimed bodies also cannot be positively identified in the population register suggests that corresponding identification records for these individuals do not exist with the Department of Home Affairs. This implies that many destitute people in South Africa are not registered as citizens. It may also suggest that the processes and techniques employed to verify identification through the population register may be flawed²¹.

Another dilemma that often surrounds unidentified deceased persons is that they may be in a geographical region where they are not known and therefore not identified. Information about unidentified decedents is often not communicated to anyone outside the district in which the death occurred, and such information may not reach relatives living outside of the district²¹.

Also contributing to the number of unknown deceased individuals admitted to Medico-Legal Laboratories are the large number of persons who are reported missing on a daily basis in the country, some never to be found²¹. According to the Bureau for Missing Persons over 4000 people were reported missing in 2007 with close to 3000 reported missing in 2008²². A staggering statistic if it is considered that these persons may lay unidentified at one of the Medico-Legal Laboratory facilities in the country.

At present, no procedure in which missing persons' profiles are matched with unclaimed bodies seems to exist in South Africa²¹. It is therefore not known whether any unidentified persons, and how many of them that are buried as paupers, may be amongst those reported missing. This cannot however be verified as statistics, or any other information regarding missing and unclaimed bodies, are not formally collected²¹.

It thus becomes increasingly important to conduct research into the number of unidentified bodies at Medico-Legal Laboratory facilities in South Africa in order to estimate the number of unidentified deaths on an annual basis, to identify the demographic characteristics associated with the unidentified deceased, to determine whether the rate of such deaths vary geographically or over time, and to better characterize the causes of death in such cases.

1.2 Literature review

Establishing the identity of the decedent is a very important aspect in any death investigation as there are many social, legal and financial considerations or implications following death^{23,24}. Identification of the decedent allows family members and acquaintances to grieve and settle the decedent's affairs.

In addition, investigation of the death is greatly facilitated when the identity of the decedent is known²³. When the identity is not known, the body may have to be stored for a lengthy period of time and the costs incurred during this time and with the eventual disposal of the body are considerable. In addition, the delayed or problematic identification of a body adds pressure to the already stretched resources of the South African Police Service and other Government Departments.

In non-forensic or natural deaths, identifying the decedent is rarely a concern because most people die at home or in a health care facility⁵. Identification is more often problematic in cases admitted to Medico-Legal Laboratory facilities because death may occur unexpectedly and no identification is carried, the next of kin may not be aware of the death of their loved one or there may be injuries and/or post-mortem changes which may preclude visual identification of the decedent^{23,24}.

Identification of the deceased can be performed in a variety of ways. It is convenient to categorize the means of identification into positive and presumptive²³.

Positive identification entails scientifically establishing identity through the presence of known unique characteristics. Positive methods of identification include fingerprints, dental characteristics, radiographic comparisons and the presence of certain permanently implanted medical devices^{23,25-29}. DNA analysis is generally considered a method of positive identification recognising that an identical twin would be expected to carry the same DNA pattern³⁰.

Presumptive methods of identification include those which rely on non-unique or inconstant features such as clothing, physical characteristics, circumstantial evidence, exclusion and visual identification. All methods of identification however require that a known characteristic of an individual be compared with the same characteristic of the unknown decedent^{23,24}.

Despite the various methods available to assist in the identification of the deceased, a large number of bodies still remain unidentified at Medico-Legal Laboratory facilities in South Africa. Reasons for this may be the unavailability of fingerprints, poor fingerprinting techniques²⁹, fingerprints not on the Automated Fingerprint Identification System (AFIS), advanced decomposition, severe burns or trauma, lack of availability to dental care in general and access to dental records²⁸ or radiographic evidence, and the difficulty in obtaining a reference sample for DNA comparison²⁵.

Other factors that contribute to the large number of unidentified bodies include the lack of identity documentation and thus fingerprints on file for the majority of the South African population, the high number of unemployed³¹ and destitute with no known family or relatives, and the increasing number of illegal immigrants that come into the country.

Process of identification at Medico-Legal Laboratory Facilities

When a body is admitted to a Medico-Legal Laboratory (The Facility), a presumptive identity for the deceased may already be known or no known identity for the deceased may be available. In order to confirm the identity of the deceased, a family member is required to perform a visual identification. Once the identity of the deceased has been established and the post-mortem completed, the body may be released for disposal.

In instances where no identity is known and the body has not been identified within seven days of being admitted to the Facility, fingerprints as well as a tissue sample for DNA analysis is collected. The fingerprints are sent to the Local Criminal Record Centre (LCRC) and the DNA sample kept in a fridge at the Facility.

At the LCRC an attempt is made to establish the identity of the deceased by comparing the fingerprints taken at the Facility to the fingerprint records of known offenders on their system. If no identity can be ascertained in this manner, the fingerprints are sent to the Department of Home Affairs to assist in the possible identification of the deceased. Fingerprint records for the majority of the population should exist with the Department of Home Affairs, as all persons are required to provide fingerprints when applying for identity documents, passports and drivers licences.

The result of the fingerprint analysis is then sent back to the Medico-Legal Laboratory Facility. One of two results may be obtained through this process. Either no identity could be established at either the LCRC or the Department of Home Affairs or the identity of the deceased has been obtained. In instances where an identity has been obtained, a last known address for the deceased is provided (where available). The result of the fingerprint analysis is then handed over to the investigating officer at the SAPS in charge of the case in order to track down the family of the deceased.

If the investigating officer is unable to locate the family of the deceased within two weeks of receiving the fingerprint results, an application to bury the body as a pauper is submitted. Once approval for pauper burial has been obtained, the body is released to the funeral undertaker which has been contracted by the State to perform such pauper burials. Regulations¹⁸ state that an unidentified body may be buried as a pauper within 30 days from admittance; however unidentified bodies are kept at the Facility on average for 3 months before being released for pauper burials.

Additional investigations such as post-mortem dental examinations or x-rays may also be performed in order to assist in the identification of the deceased. These are however done at the discretion of the pathologist¹⁸.

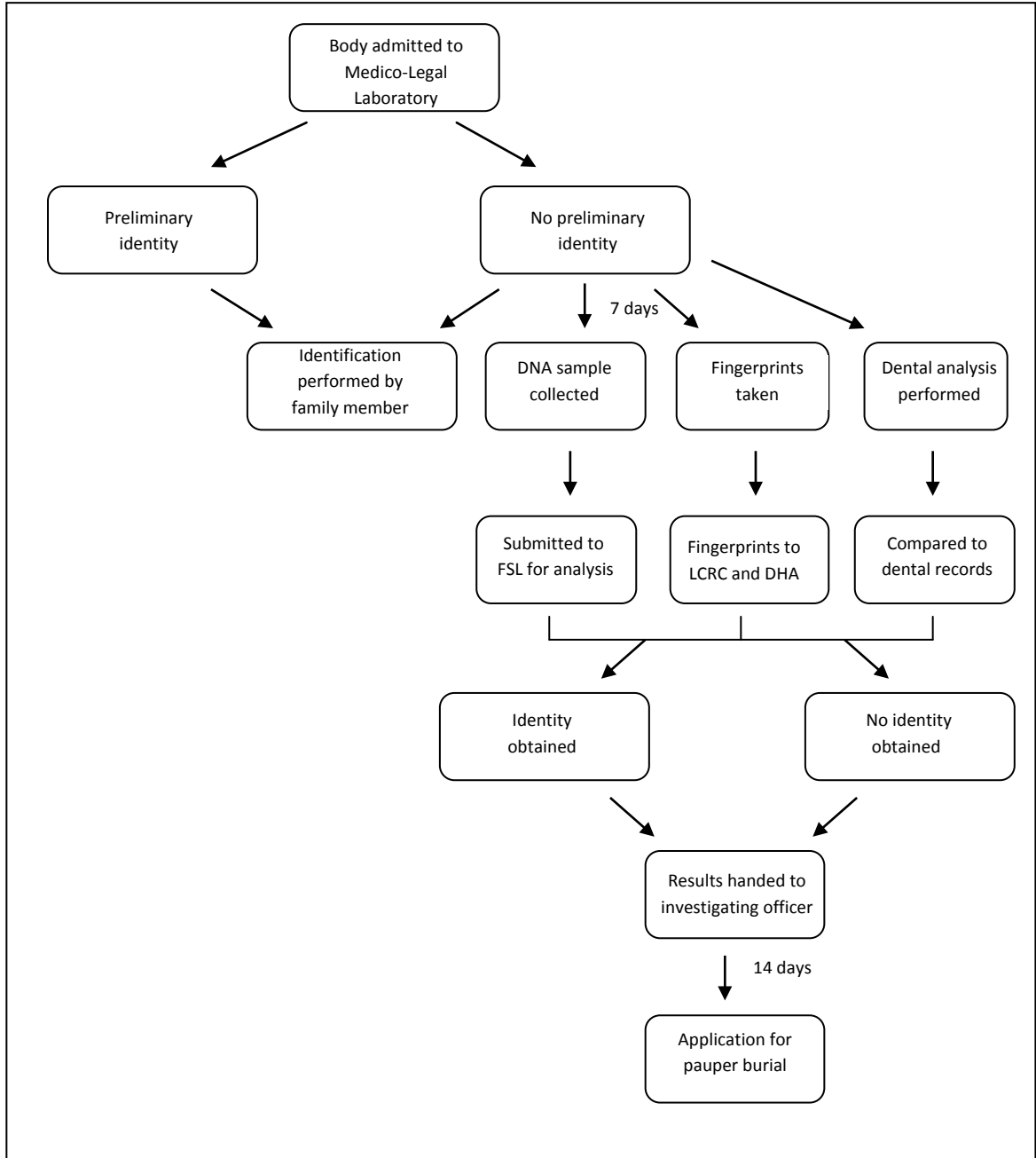


Figure 1. Process of identification at Medico-Legal Laboratory Facilities

Process of DNA identification

DNA analysis is very rarely employed to assist in identification of unknown bodies in South Africa. This is due to the fact that it is a timely and costly process, and often no reference sample to which the DNA sample can be compared is obtained.

The current practice at Medico-Legal Laboratory facilities in South Africa is to collect specimens for DNA analysis in all bodies which have not been identified within seven days from admittance, as well as in cases in which visual identification of the body is not possible due to mutilation, trauma or post mortem changes. These DNA samples are either handed to the investigating officer handling the specific case or, as is the case in Pretoria, submitted directly to the Forensic Science Laboratory (FSL), run by the South African Police Service, for DNA analysis.

In instances where the DNA sample has been handed to the investigating officer, it is his/her responsibility to track down the family of the deceased in order to obtain a reference sample and to submit both these samples to the Forensic Science Laboratory for analysis. These DNA profiles are then compared to one another with a match confirming the identity of the deceased. This process is however timely and may take up to six months to complete.

Samples submitted directly to the Forensic Science Laboratory for analysis by the Pretoria Medico-Legal Laboratory are stored on their DNA database. The current database in South Africa is however only used for criminal intelligence and is not regulated by any specific legislation.

It is hoped that the proposed Criminal Law (Forensic Procedures) Amendment Bill³² will address the gaps in the current legislation dealing with the collection, storage and use of DNA evidence and provide for the expansion and administration of a national DNA database.

The national DNA database would contain DNA profiles collected from crimes scenes; profiles from persons suspected, reported, charged or cautioned for any recordable offence; convicted offenders and profiles from persons volunteering their DNA for the database³³.

It is this volunteer section that could assist in the identification of unidentified bodies and the importance thereof must not be underestimated. The proposed legislation³² will however first need to be implemented and will involve the integration of the system with other government departments. The success of such a system will depend on the cooperation of the departments concerned.

Unidentified bodies in the global setting

The identification of cadavers is a crucial issue in forensic pathology, but the official extent of this problem is still poorly known in most countries²⁰. The fact that an underestimated problem of unidentified decedents exists can be seen from the very small number of published articles on the topic. This is alarming as the problem is destined to increase due to the diminishing family ties in modern society and due to the increase, in certain countries, of legal and illegal immigration²⁰.

The USA's Federal Bureau of Investigation has implemented an unidentified person's file system into its National Crime Information Centre (NCIC) to establish a central repository for information concerning missing and unidentified persons. This enables law enforcement officers across the United States of America to share and cross-reference information from missing person's files against information of unclaimed bodies²¹.

This has however not solved the problem²¹. Due in part to the sheer volume, missing persons and unidentified human remains cases are a tremendous challenge to state and local law enforcement agencies. The workload for these agencies is staggering: More than 40 000 sets of human remains that cannot be identified through conventional means are held in the evidence rooms of medical examiners throughout the USA. But only 6 000 of these cases (15%) have been entered into the Federal Bureau of Investigation's NCIC database³⁴.

The state of affairs is no better in Europe. It is alleged that more than 1 500 cadavers and human remains are still unidentified in the European Union, though the exact numbers are unknown. A study conducted by sending questionnaires to central police headquarters (Interpol Offices) of each country of the European Union requesting data on the number of unidentified decedents saw only 8 countries respond in full, with many admitting that official data was not available²⁰.

Spain is said to have over 2 500 reported missing persons and approximately 1 000 unidentified human remains³⁵. A study conducted in Italy indicated that on average 17% of cadavers remain unidentified²⁰. Concerning discovered but unidentified cadavers, studies in France indicate that despite all efforts to identify bodies, 10.2% still remain unidentified and 1 000 – 3 000 are buried as “X bodies” (i.e. unidentified) each year³⁶.

In Brazil, like many other countries, official statistics about the number of unidentified cadavers and human remains is not kept. A 2007 study determined that there were 7287 cadavers that had not been identified in five Brazilian states. Based upon this information, there could be an estimated 10 000 – 14 000 unidentified cadavers per year throughout the entire country³⁷.

The exact number of unidentified decedents at Medico-Legal Laboratory facilities in South Africa is not known, with the last known study into the phenomenon published in 1998²⁷. Although only a small percentage of the total case load may remain unidentified, the actual number of unidentified bodies is a source of concern.

From the available data, it can be seen that unidentified bodies is a global challenge faced by most countries in the world. Statistics estimate that on average 10% of all medico-legal cases are unidentified remains³⁸ but despite all efforts, the remains of thousands may never be identified.

Implications of unidentified bodies

Missing persons and unidentified bodies

Missing persons and unidentified remains constitute a global problem³⁷. It is important to understand that unidentified bodies have consequences for society on numerous levels³⁹. According to Henderson and Henderson⁴⁰, for every missing person that is reported, at least twelve other individuals are affected whether it be emotionally, psychologically, physically or financially.

Statistics indicate that 2 300 Americans are reported missing on a daily basis⁴¹, including both children and adults. The National Centre for Missing Adults, based in Phoenix, currently has 48 000 active cases registered on their database. Other resources such as The National Crime Information Centre's Missing Person File indicate that they have 102 764 active missing person cases of which 51 710 are missing adults⁴².

This phenomenon is however not limited to the United States alone. Statistics released by the Salvation Army indicate that 35 000 people are reported missing in Australia each year, or one every 15 minutes⁴⁰. Statistics of the exact number of missing persons reported in South Africa are however not readily available, despite the fact that a large number of people are reported missing in South Africa each day²¹.

Every unidentified body admitted to a Medico-Legal Laboratory Facility may therefore be one of these individuals who have been reported missing by their loved ones. However, as no statistics or information regarding missing persons or unidentified bodies are formally collected and analysed, it is not known how many of the unidentified bodies buried as paupers each year may be amongst those reported missing²¹.

Unidentified bodies and insurance fraud

Difficulties in positively identifying the deceased may be utilized by the unscrupulous to commit life insurance fraud by substituting the identity of the deceased for that of a life insured who is still living.

While insurance companies are hesitant to reveal the amount paid out in respect of fraudulent claims, it is estimated that the cost of life insurance fraud runs into millions of rands each year⁴³. The reality is that there is no clear indication of how much money is lost to insurance fraud because the crime is designed to escape detection. When it is estimated that R100 million worth of fraudulent life insurance claims are filed each year, it does not take into account all those insurance scams that were successfully perpetrated and therefore not discovered⁴⁴.

Fraudulent claims in South Africa have more than tripled to R78,4 million in 2007, compared to R21,1 million in 2006⁴⁵. This is attributed in part to the formation of syndicates that deal with dead bodies. It is believed that these syndicates have informants in most of the country's mortuaries who advise the syndicate members when a body has been unclaimed or cannot be identified⁴⁶. Other parties also alleged to be involved in these syndicates are doctors, funeral parlours and corrupt Home Affairs Officials⁴⁴.

According to the convener of the Forensic Standing Committee of the Association for Savings and Investment South Africa (ASISA) syndicates will also disfigure and sell an unidentified body between syndicates to commit multiple cases of fraud⁴⁷. Mortuary assistants are furthermore known to rent out an unidentified body to as many as five different claimants before clearing it for a pauper's burial⁴⁷. Once a body has been obtained, these fraudsters would then use stolen identities to make fraudulent death claims in order to cash in on life insurance policies⁴⁶.

The highest number of fraudulent life insurance cases have been recorded in KwaZulu-Natal (40%) followed by Gauteng (25%) and then the Eastern Cape (14%)⁴⁵. It is thus evident that identity theft and life insurance fraud is rife within South Africa and measures which could prevent or reduce these numbers should be investigated.

1.3 Aims of study

- (i) To assess the size and magnitude/scope of this problem within the area of jurisdiction of the Forensic Pathology Service in Pretoria and to establish the demographic profile of the specified cases;
- (ii) To ascertain whether certain trends can be established in the research population during the study period of four years in order to create baseline values. Clearly this is an important secondary objective when the results are compared with similar studies which may be undertaken in future; and
- (iii) To determine how these cases are managed within the Forensic Pathology or Medico-Legal Investigation of Death Service and whether there are any obvious deficiencies or inconsistencies in terms of case management.
- (iv) This study may also be extended to include other Medico-Legal Laboratory Facilities in Gauteng and other provinces in order to assess the magnitude of the problem nationally. Ultimately, the intent will be to establish appropriate protocols or guidelines for the investigation and recordkeeping of such cases to be used by a variety of agencies nationally.

Chapter 2

METHODOLOGY

2.1 Study design

This is a retrospective descriptive study of all unidentified bodies at the Pretoria Medico-Legal Laboratory for the period 1 January 2005 to 31 December 2008.

All data related to these cases will be analyzed, paying particular attention to demographics and other medico-legal perspectives in order to evaluate the case management process of such cases at the Pretoria Medico-Legal Laboratory.

2.2 Subject selection

Records of individuals admitted to the Pretoria Medico-Legal Laboratory during the specified study period and which remained unidentified despite routine and specific attempts as establishing their identity (as performed by the Forensic Pathology Service, South African Police Service and Department of Home Affairs) will be included in this study.

2.3 Research procedure

The Pretoria Medico-Legal Laboratory's Admission Register (Z183) was used to identify cases and retrieve specific research data. In addition individual case files were examined in order to obtain detailed data related to each individual case.

In each case the following parameters were recorded, where available:

- Gender;
- Age;
- Race;
- Date of injury;
- Date of death;
- Date of post mortem examination;
- Suburb and police jurisdiction where the body was found;
- Scene of injury;
- Medical treatment prior to death (where relevant);
- External cause or circumstance of injury;
- Apparent manner of death;
- The cause and/or mechanism of death;
- Type and nature of additional/special investigations performed during/after autopsy examination;
- Whether fingerprints could be taken;
- If no fingerprints could be taken, the reason that this could not be done;
- The date on which fingerprints were taken;
- The date on which the fingerprint results were received;
- Whether a specimen was retained for DNA analysis;
- Whether special identifying features were recorded in the autopsy report by the pathologist at the time of the autopsy (such as scars, tattoos, etc.);
- Any possible mechanism whereby the deceased could have been identified (specific/unusual clothing or jewellery, documents, etc.);

- Any factors which may preclude identification;
- Whether a fingerprint has been recorded on the BI-1663 (Notification of Death Form);
- Date of admission to the Facility;
- The date of release of the body to the funeral undertaker;
- Time period for which the body was kept in storage at the Facility;
- Whether the body was buried or cremated.

2.4 Ethical considerations

In terms of the National Health Act (Act no. 61 of 2003), managers and heads of institutions may review institutional records, including patient files, where the intent is to establish or identify trends or prevalences. To this end case files/records at the Pretoria Medico-Legal Laboratory were reviewed.

Approval for conducting this study was also obtained from the Facility Manager of the Pretoria Medico-Legal Laboratory, the Chief Executive Officer of the Forensic Pathology Service in Gauteng and the Faculty of Health Sciences' Research Ethics Committee at the University of Pretoria.

The study was undertaken in such a manner as to ensure confidentiality of data. A research number was allocated to each sample case with only the researchers having access to the correlators. No case specific data was revealed or published in the findings of the study and no names of the deceased were included in the research data.

2.5 Data and documentation

Confidentiality

Extreme care was taken to ensure confidentiality of all data. Use was made of case reference numbers only, thereby minimizing the risk of disclosing personal information.

Collection of data

The Pretoria Medico-Legal Laboratory's Admission Register (Z183) was used to identify cases and retrieve specific research data. In addition, individual case files were examined in order to obtain detailed data related to each individual case. The data obtained was then recorded onto data capture sheets to allow for collation and analysis thereof.

Processing of data

All data recorded on the data capture sheets were compiled into a large data sheet and handed over to a biostatistician for analysis.

Analysis of the data involved the use of chi-square tests and Poisson regression analysis in order to determine specific trends. Data summary for management information will employ frequency percentages, 95% confidence intervals and cross tabulation.

2.6 Funding

No additional funding was needed in order to perform this study. The administrative costs incurred during the investigation were carried by the research funds of the Department of Forensic Medicine / Forensic Pathology Service.

2.7 Time frame

Data from 1 January 2005 to 31 December 2008 was collected. The Pretoria Medico-Legal Laboratory handles approximately 2 500 to 3 000 cases each year. Of these 10% (250 - 300) remain unidentified. A study period of four years will therefore yield approximately 1 000 cases which will be sufficient to yield legitimate statistics and allow for establishing of trends.

2.8 Reporting

It is envisaged that formal oral presentations pertaining to the findings of this research will be made at scientific proceedings. Specifically, it is intended that such a presentation be made at the annual conference of the Federation of South African Societies of Pathology.

This research will also be submitted for publication in a peer reviewed scientific journal. Journals of choice for submission of the manuscript include the Journal of Forensic Sciences and Forensic Science International.

The findings may also be disseminated among various government agencies that may benefit therefrom.

Chapter 3

RESULTS

During the study period from 1 January 2005 to 31 December 2008, a total of 848 bodies remained unidentified at the Medico-Legal Laboratory in Pretoria despite routine and specific attempts at establishing their identity.

In 2005, of the 2253 cases admitted to the Pretoria Medico-Legal Laboratory 154 (7%) remained unidentified. In 2006 a total of 211 bodies remained unidentified. During 2007 the total case load at the Medico-Legal Laboratory in Pretoria was 2339 with 233 (10%) bodies remaining unidentified. In 2008, 250 bodies remained unidentified despite all efforts to establish their identities.

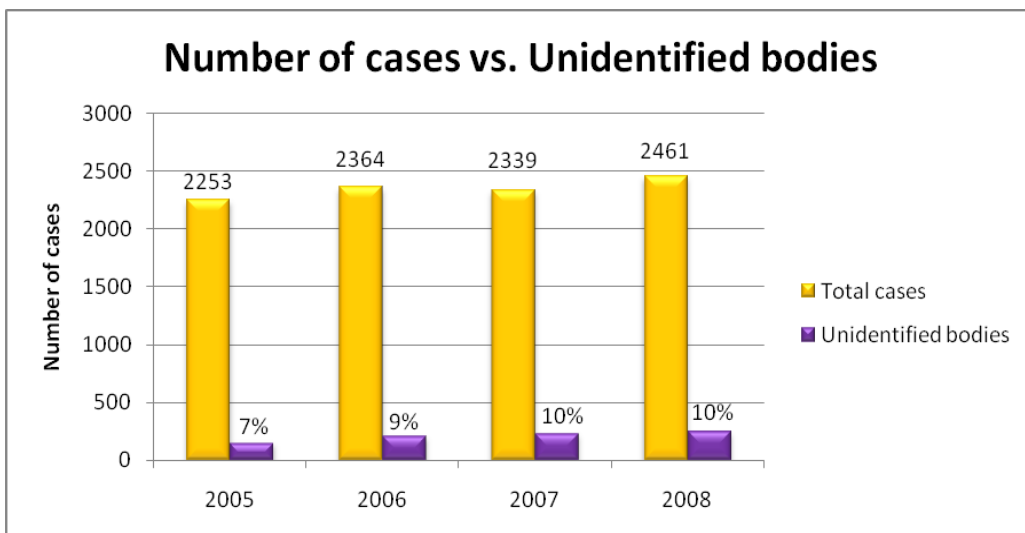


Figure 2. Percentage of unidentified bodies compared to total case load

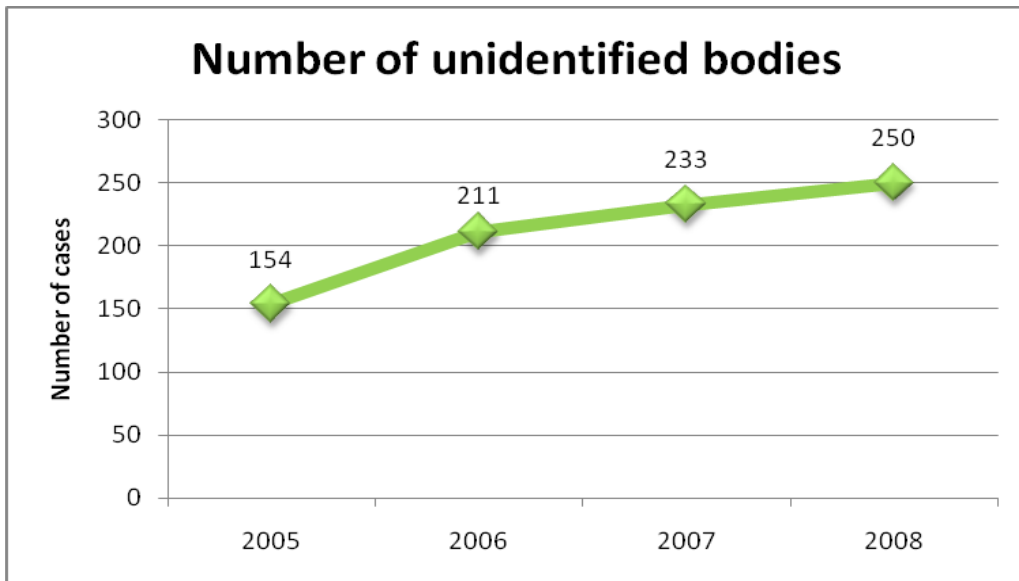


Figure 3. Number of unidentified bodies per year

Age, sex and race

Of the 848 unidentified bodies admitted to the Medico-Legal Laboratory in Pretoria during the study period the estimated age of 613 cases were available on file. The remainder of the cases were divided into age categories, which included seven infants, one child, three young adults or adolescents and 224 adults.

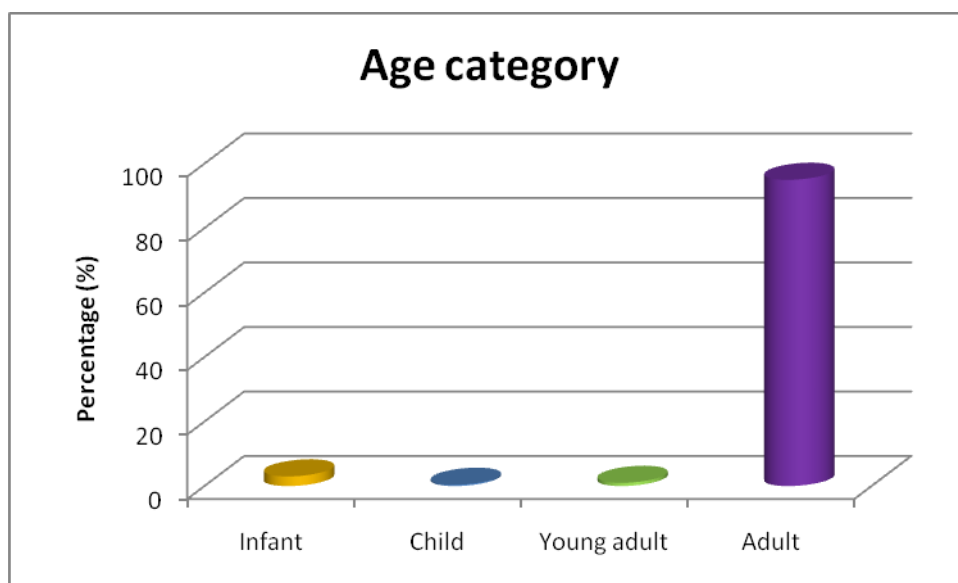


Figure 4. Age category division

In the 613 cases in which an estimated age appeared on the case file, the ages ranged from zero to 79 years. The exact age distribution can be seen in figure 5.

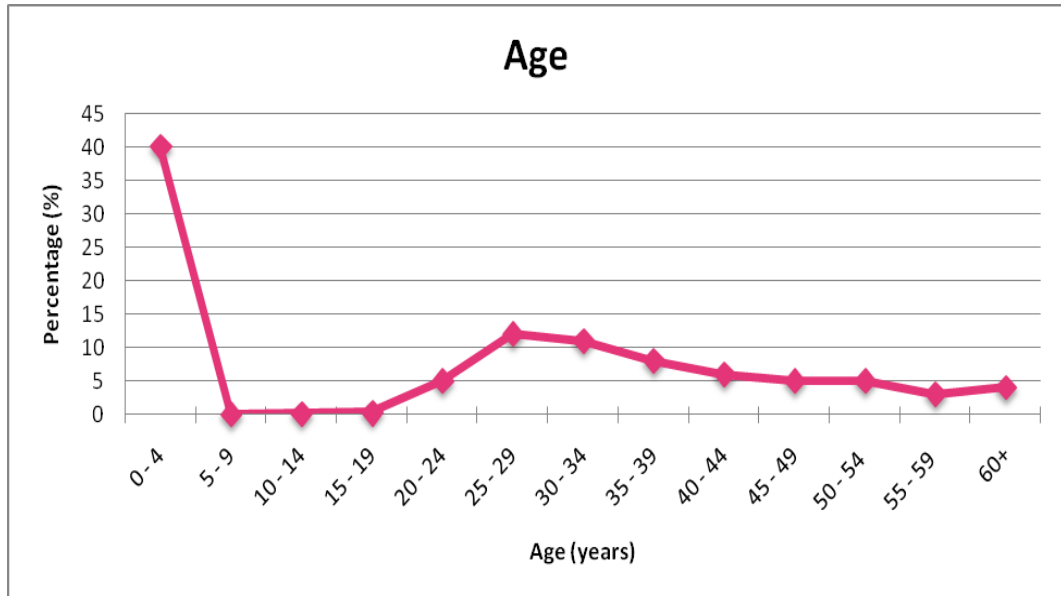


Figure 5. Age distribution by 5 year age group

Of the 848 cases identified, the majority were male (75%). Females comprised 18% of the cases, and in 8% of all cases, the sex could not be determined. The ratio of male to female cases is approximately 4:1

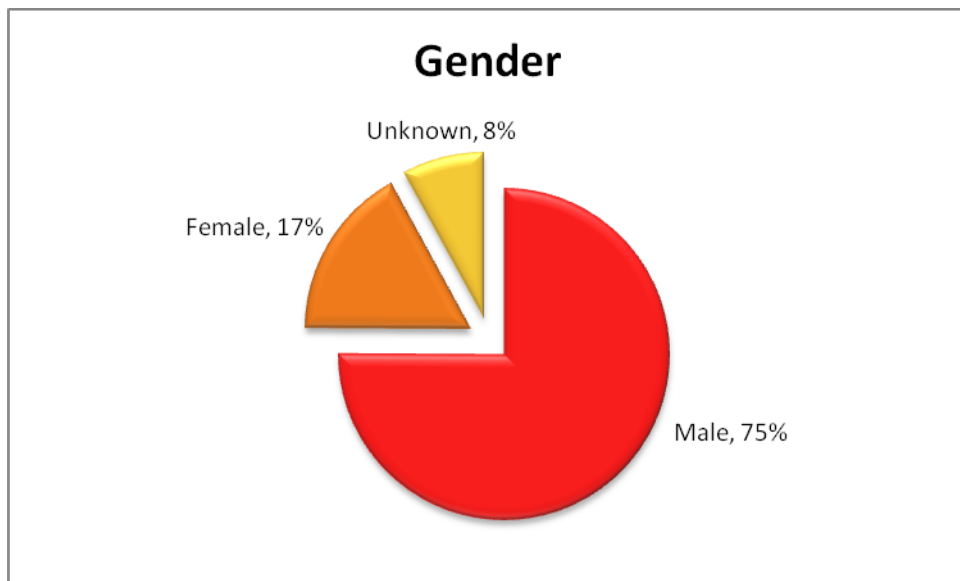


Figure 6. Gender distribution

The race of the majority of the unidentified bodies was black, constituting 687 (81%) of the 848 cases. The remainder of the unidentified bodies were white (3%), coloured (1%) and asian (1%). In 123 (14%) of the cases no race determination could be made. This racial distribution closely resembles the population distribution within Pretoria and South Africa as a whole.

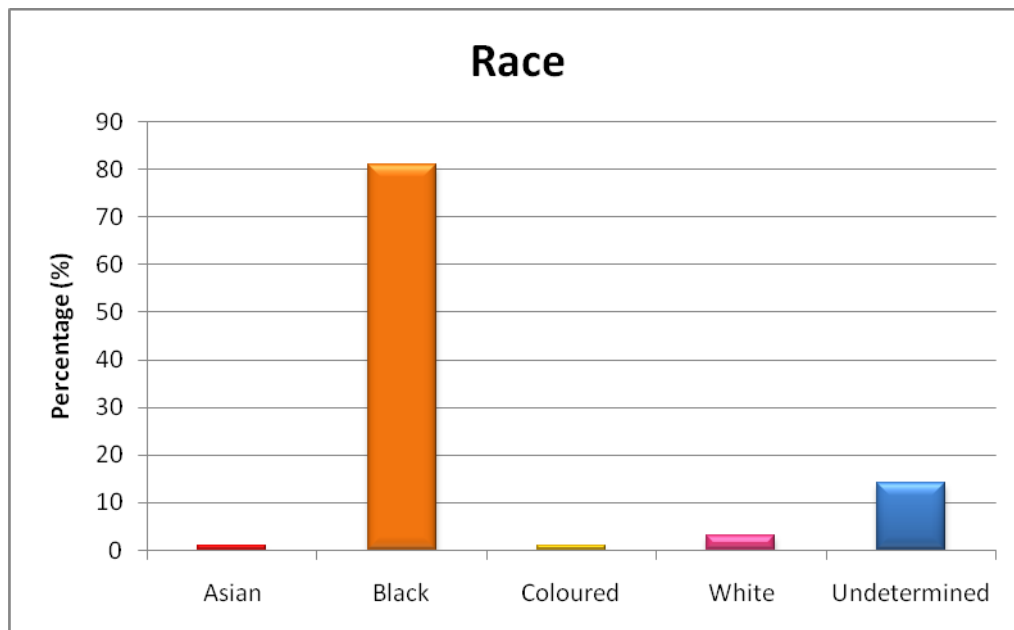


Figure 7. Distribution of unidentified bodies according to race

Scene of injury

The scene of injury in the majority of the cases was an open veld, land or water (23%). This was followed by public places (22%) and roads, streets or highways (21%). Private residences (8%), informal settlements (8%) and residential institutes (2%) were rarely the scene of the incident. In only 2% of cases did the injury occur within a hospital or medical facility.

(Figure 8, page 33)

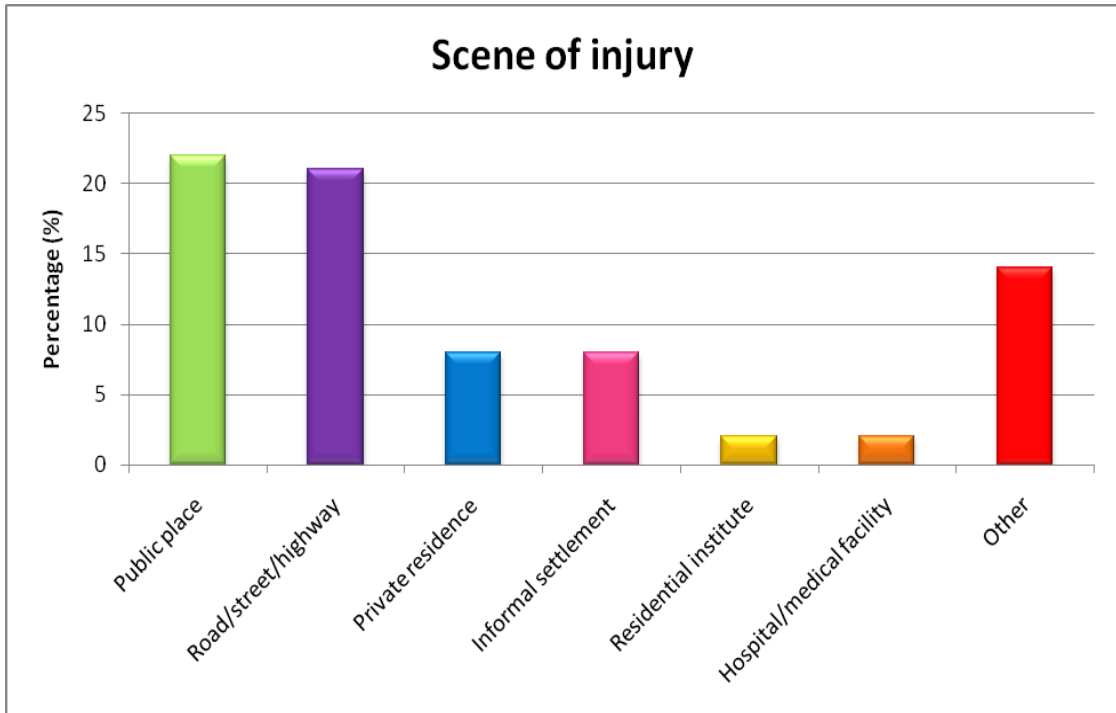


Figure 8. Scene of injury distribution

Medical treatment

Of the 848 cases 673 (79%) received no medical treatment, indicating that they passed away at the scene of the incident. Emergency care at the scene was administered in 54 cases (7%) and 115 (14%) were admitted to hospital for treatment of their injuries.

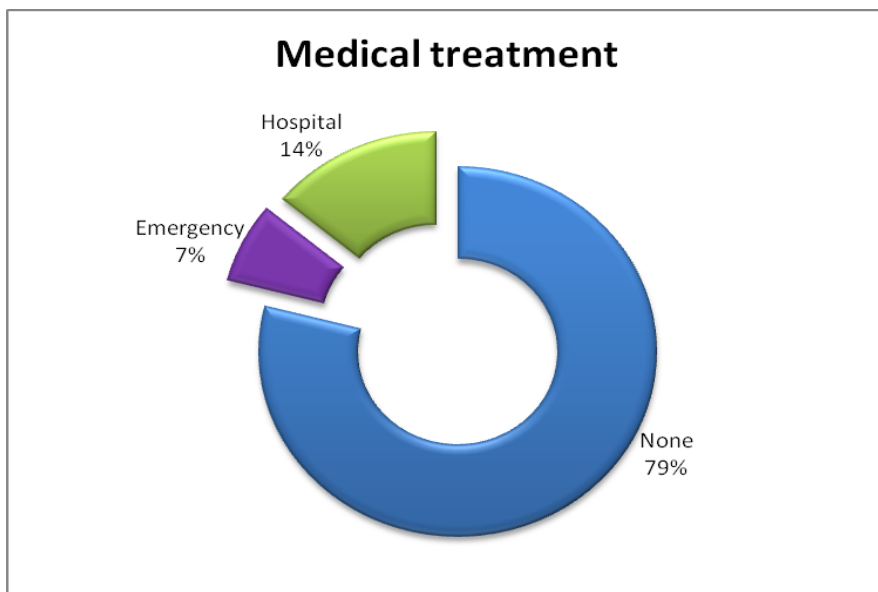


Figure 9. Medical treatment administered

External cause of injury

The major causes of death that could be identified were motor vehicle accidents including driver, passenger and pedestrian accidents (21%); abortions or stillbirths (20%); assault with either a sharp or blunt instrument (12%); natural causes (11%); firearm fatalities (4%); and asphyxial deaths (4%), which included hanging and drowning. All other causes of death such as poisoning were grouped together and comprised 12% of all cases. In 16% of the cases no cause of death could be established at autopsy.

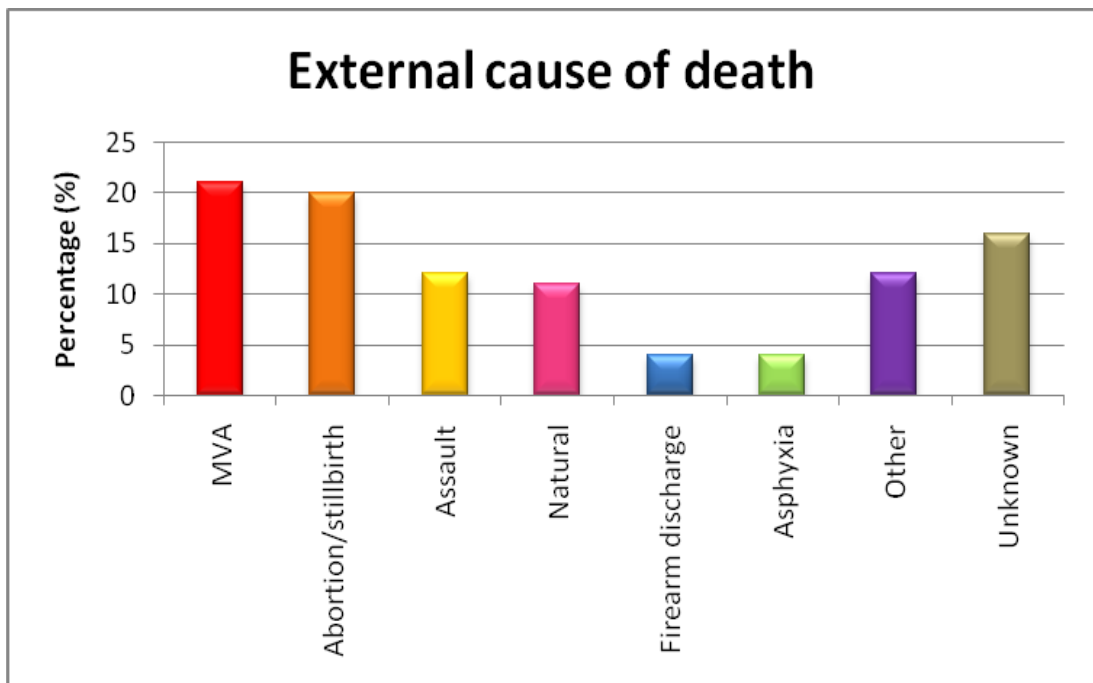


Figure 10. Cause of death distribution

Manner of death

The manner of death is almost equally distributed between natural (25%), homicidal (23%) and accidental deaths (22%). In only 3% of cases is the manner of death deemed to be suicidal. However in 233 (27%) of the cases, no determination of the manner of death could be made.

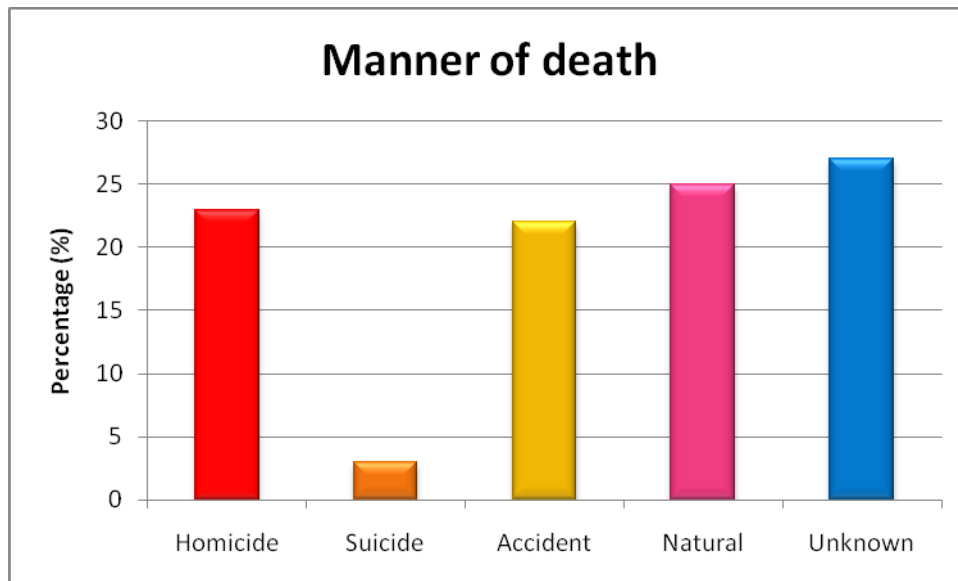


Figure 11. Distribution of manner of death

Special investigations

Special investigations included the determination of the blood alcohol level of the deceased, the taking of histological samples for microscopic diagnosis of disease, and the taking of samples for toxicological analysis.

Blood alcohol concentration determination was performed in 411 (48%) of the 848 cases. Histological specimens were retained in 12% of cases and toxicological analysis performed in 6% of cases. In 337 (44%) of cases no special investigations were performed. **(Figure 12, page 36)**

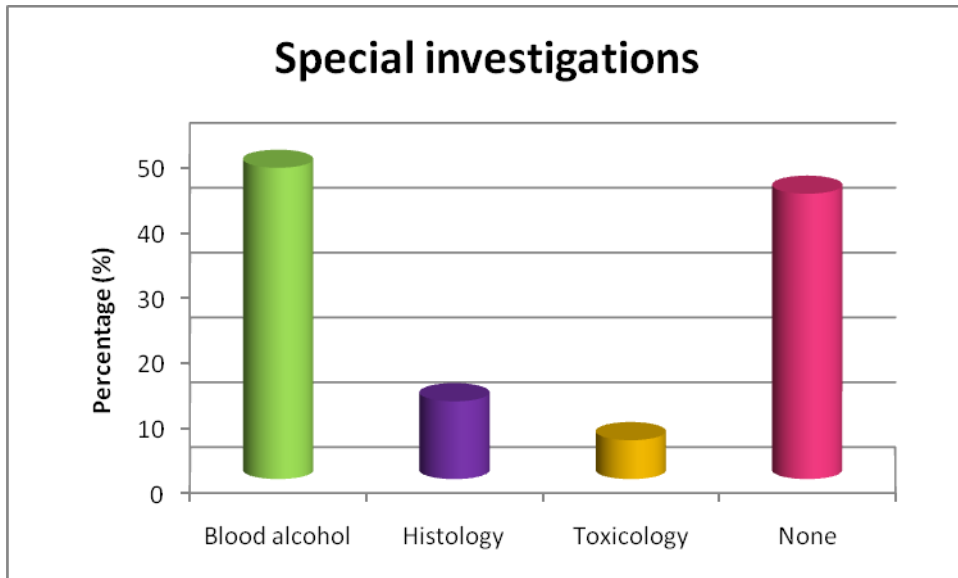


Figure 12. Special investigations performed

It is important to note that more than one special investigation can be performed in each case. In figure 13 a graphical presentation of the number of cases in which one, two and three special investigations were performed in the same case, is given.

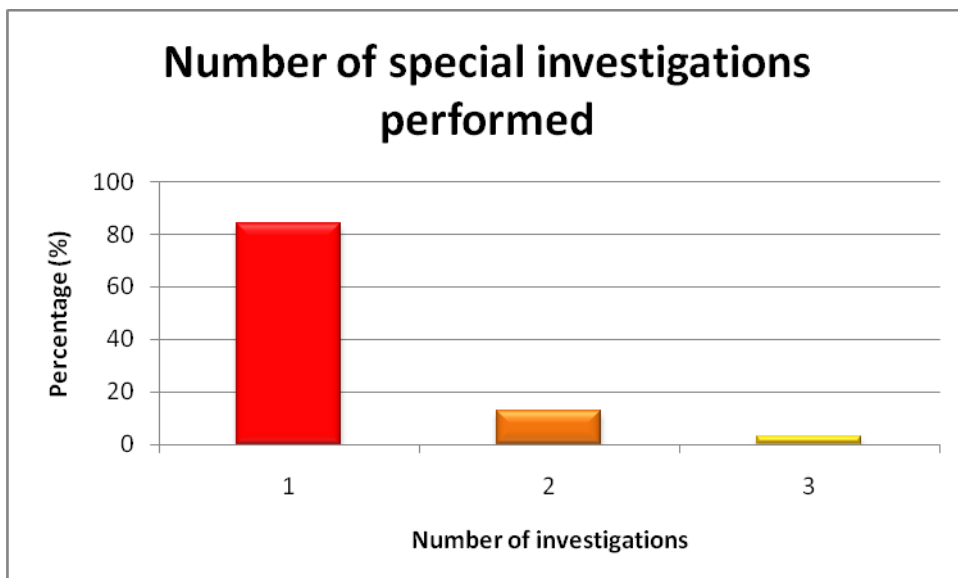


Figure 13. Number of special investigations performed in each case

Fingerprint analysis

Fingerprints were taken in 458 (54%) of the 848 cases with the intent of establishing their identity. In 390 (46%) cases no fingerprints could be taken. Reasons for this included the fact that they were children (64%) and thus no fingerprints would be available on file for comparison; the body was decomposed (17%), skeletonized (8%) or burnt (6%); and in 5% of cases no reason could be found within the case file as to why fingerprints were not taken.

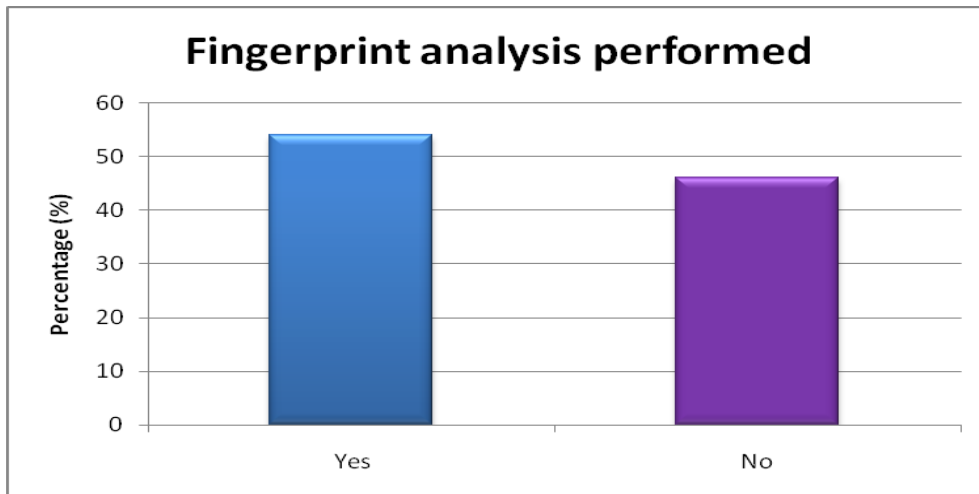


Figure 14. Fingerprint analysis distribution

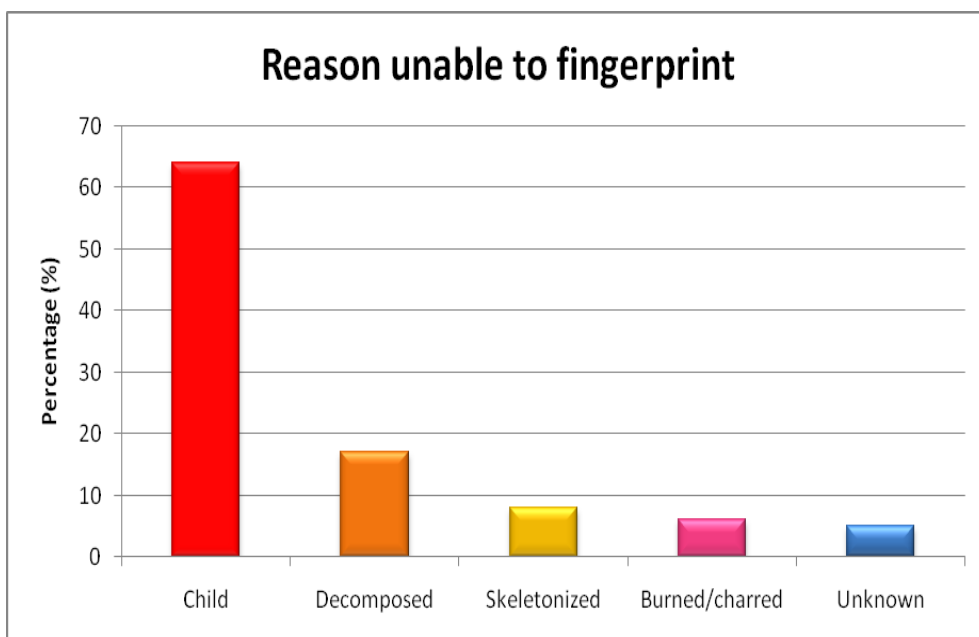


Figure 15. Reasons no fingerprints could be recorded

The average time frame from the date of fingerprints until a result is obtained is approximately two weeks.

DNA specimens

DNA specimens which could later be used to establish identity should a family member be located, were only retained in 50% (420) cases. In the additional 428 no record could be found as to whether a DNA specimen was retained. This is due to the fact that such information was not formally recorded in any register until 2007.

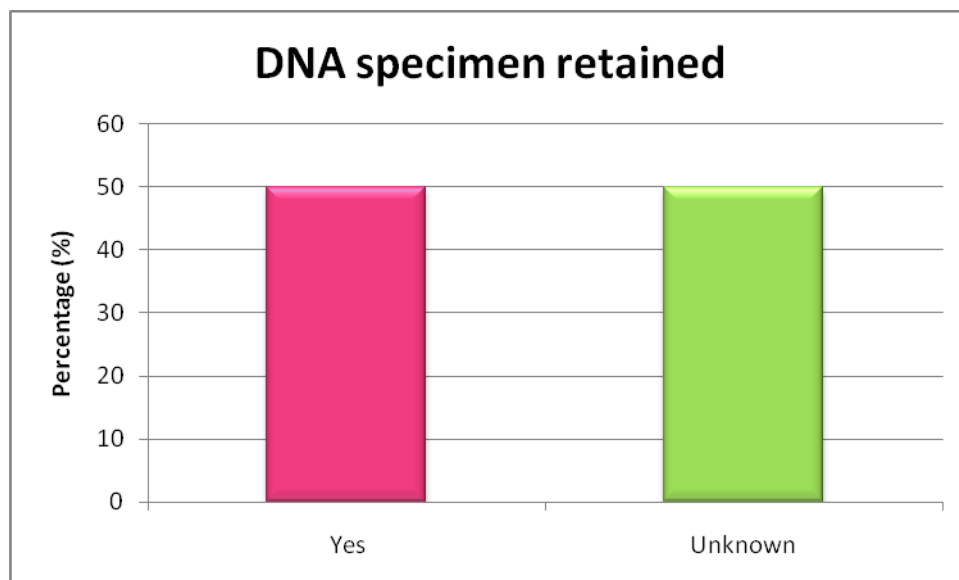


Figure 16. DNA specimen retained

Special identifying features

Special identifying features which could assist in the identification of the unidentified individuals were recorded in 282 (33%) of cases. In 66% of cases no special identifying features could be found.

Special identifying features recorded included scars (42%); a beard or moustache (32%); tattoos (22%); dentures, dental work or any dental condition or deformity (16%); distinguishing jewellery (4%); body deformities (3%); skin discolorations including birthmarks (3%); implanted medical devices (1%); piercings (0.2%); moles (0.1%); previously fractured bones (0.1%); as well as documents (0.1%) which could possibly assist in obtaining the identity of the deceased. In 16% of the cases no **unique** identifying features were recorded which could be used to aid in the identification of the deceased individual.

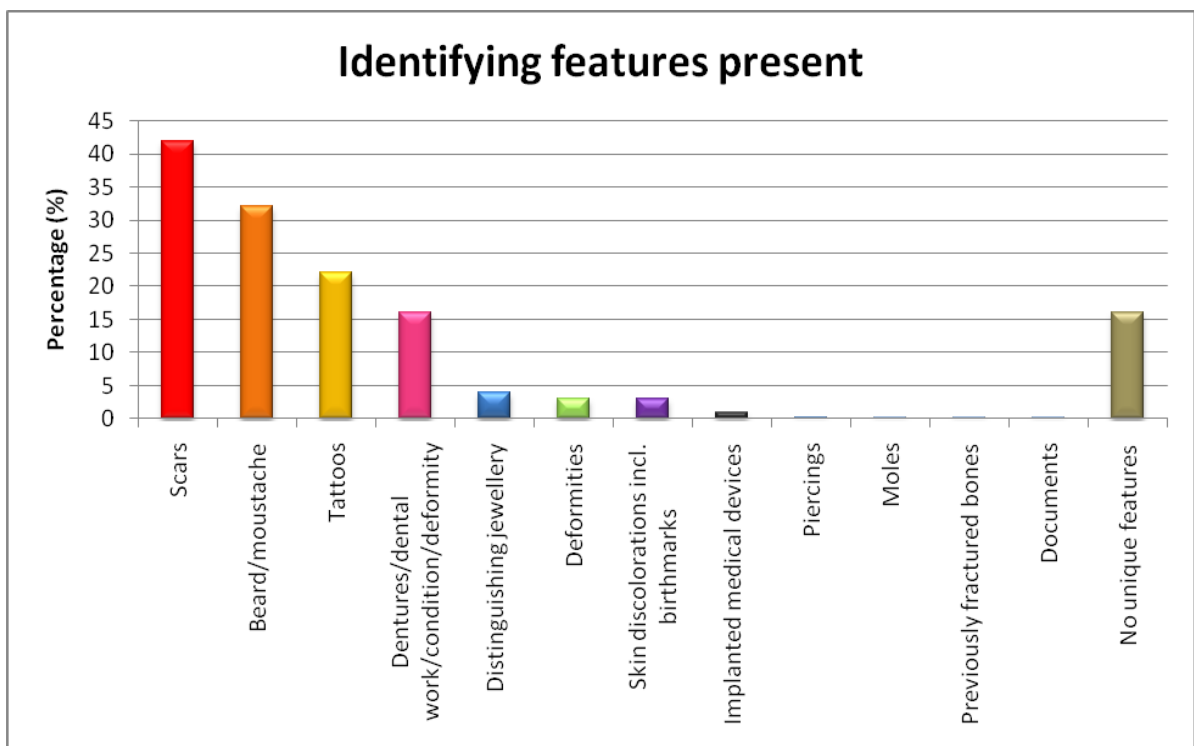


Figure 17. Identifying features recorded in post mortem report

It is important to note that if a greater number of identifying features are recorded, the possibility of obtaining an identification is exponentially increased. The graph below indicates the incidence of the number of identifying features recorded in each case.

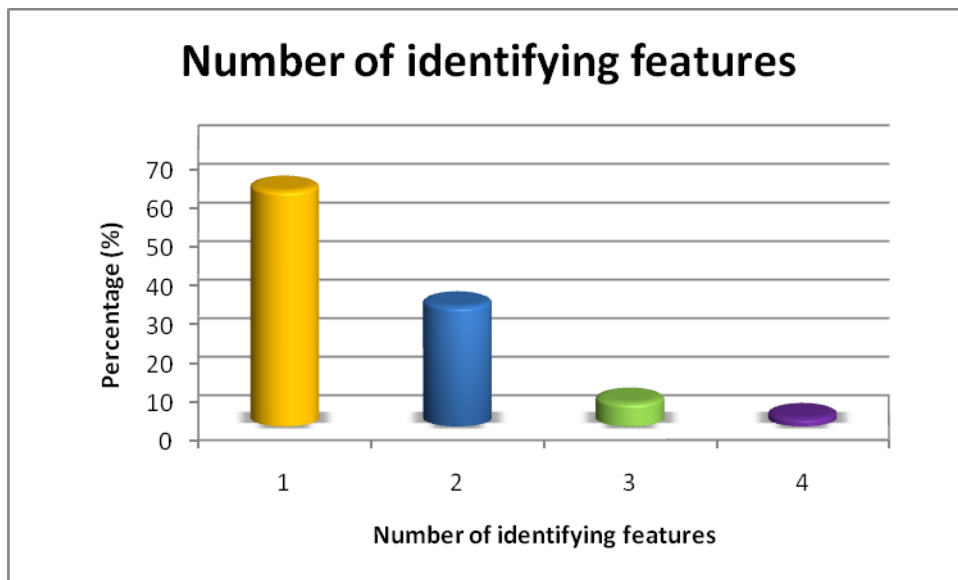


Figure 18. Number of identifying features recorded

Factors which may preclude identification

Identification of the deceased can be hampered by many factors. These include decomposition, trauma to the body and face, burn wounds or charring, deliberate mutilation of the body and skeletalization. In 240 cases (28%) factors which may preclude identification were identified. **(Figure 19, page 41)**

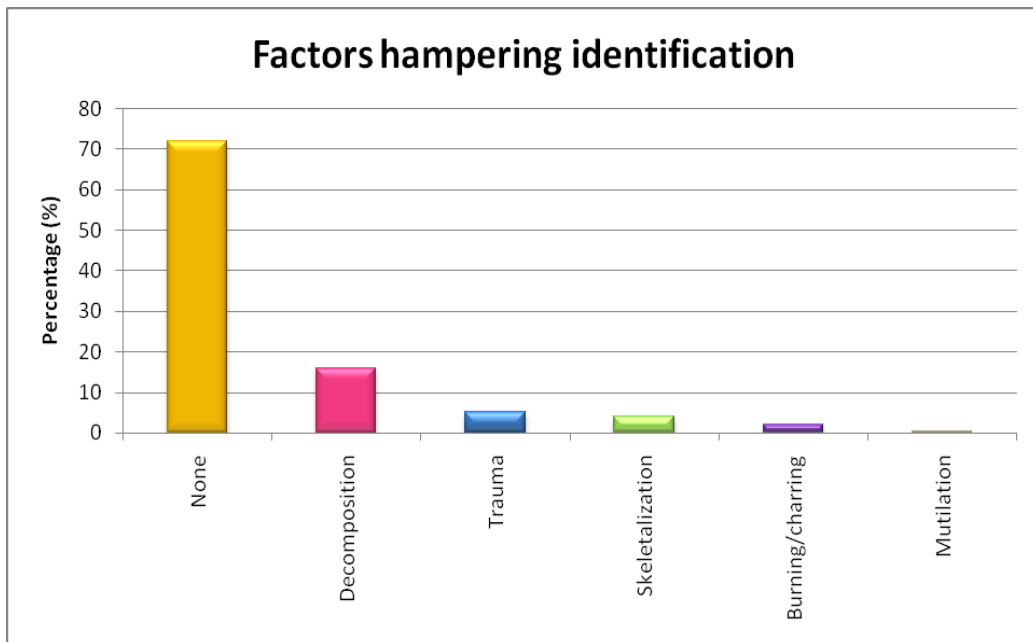


Figure 19. Factors which may preclude identification

Fingerprint recorded on BI-1663

In very few cases (20%) was a single thumbprint, as required, recorded on the BI-1663 Death Notification form. This is due to the numerous bodies which are decomposed, skeletonized, burnt or charred and mutilated; or those that have sustained trauma to the fingers, in which instance no fingerprints can be taken.

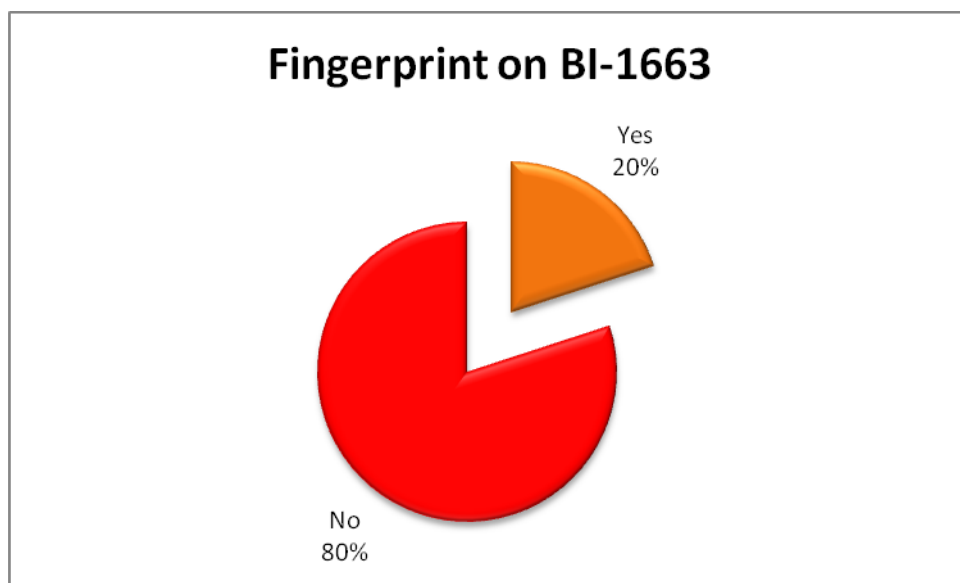


Figure 20. Thumb print recorded on Notification of Death Form (BI-1663)

Turnaround times

The average time from admission to autopsy was one to two days. The time from admission to autopsy ranged from the same day up to 25 days. Often in instances where no identity is known, obtaining detailed medical information which may assist in the post mortem investigation is problematic. In such cases, the post mortem examination may be delayed until such information can be retrieved.

Bodies that remain unidentified at the Medico-Legal Laboratory in Pretoria are usually kept for a lengthy period of time due to the numerous processes that are undertaken in order to establish their identity, as can be seen in figure 21.

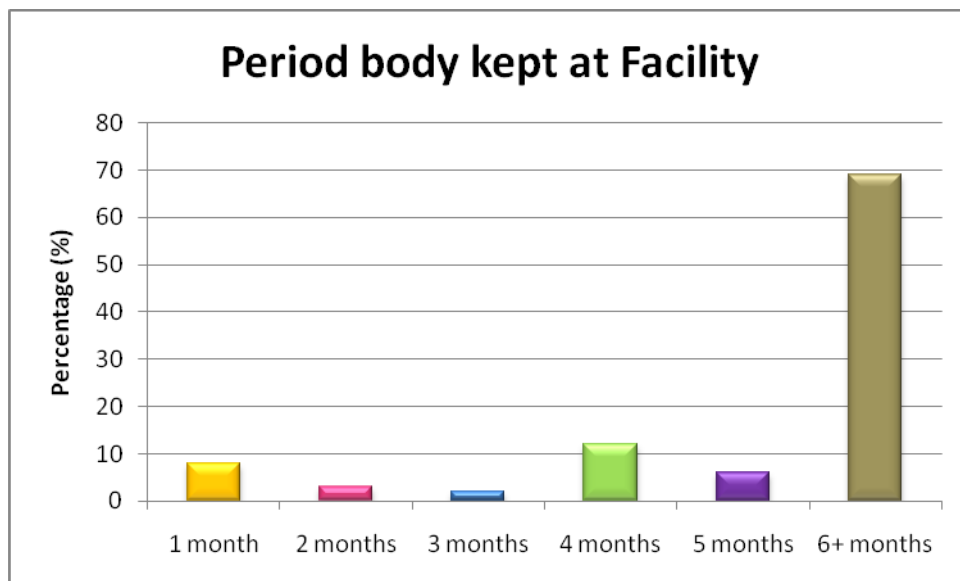


Figure 21. Period unidentified body kept at Medico-Legal Laboratory

Disposal of body

The Municipal Authorities in each area have a contract with a specific funeral undertaker who is responsible for performing all pauper burials within their municipal area. All unidentified bodies are released to the funeral undertaker, as contracted by the State, and can either be buried as paupers within a cemetery or cremated. However, due to the large number of deaths in South Africa there is a significant movement away from burials because of a shortage of land and the cost of thereof.

In 730 (86%) of cases cremations were performed with the remaining 117 bodies (14%) being buried. One case which was donated to Anatomical Pathology is not included in these statistics.

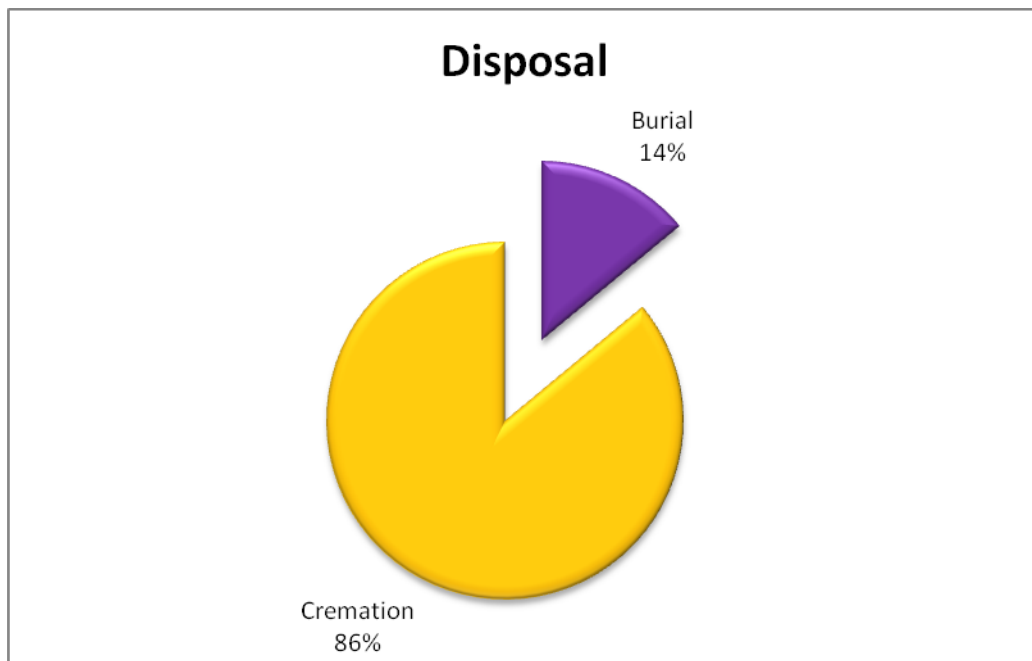


Figure 22. Method of disposal of body

Summary

The number of bodies that remained unidentified in each of the years under review ranged from 7% to 10% of the total admissions to the Pretoria Medico-Legal Laboratory. This is in keeping with the trends as seen in the forensic setting in other countries^{20,36,48}.

This is encouraging as South Africa lacks both staff and resources in the forensic field, and despite performing only limited procedures to identify the unknown deceased, the number of unidentified bodies at Medico-Legal Mortuary Facilities seems to be in line with international trends.

In the instances where the estimated age of the unidentified body was recorded on the case file, the majority of the bodies fell into the age range of 20 to 40 years. This corresponds well to published international trends^{20,48}. It is hypothesised that the reason for so many unnatural deaths occurring in this age group is the fact that these individuals are more likely to partake in risky behaviour and die as a consequence thereof.

The majority of the unidentified decedents in this study population were male, with the ratio of male to female being 4:1. This is not surprising as the male population in South Africa is greater than the female population. International studies conducted into the demographics of unidentified decedents indicate that the majority of unidentified decedents in other countries are also male^{20,36,48}.

Blacks constituted the majority of cases of unidentified bodies at the Pretoria Medico-Legal Laboratory. This is not surprising as they form the largest proportion of the population in South Africa. The majority of unidentified decedents in international studies are white^{20,36}, with very few of their unidentified decedents being black. This will however vary from country to country depending on the racial composition of their specific population.

The leading manner of death recorded was death due to natural causes (25%), closely followed by homicide (23%) and accidental deaths (22%). Suicide comprised only 3% of all the cases admitted to the Medico-Legal Laboratory in Pretoria. In 27% of cases no determination as to the manner of death could be made.

International studies classify their manner of deaths differently from the system used in South Africa. They still refer to homicide, suicides and accidental deaths, however these are subdivisions of injury related⁴⁸ or traumatic²⁰ deaths. Injury related or traumatic deaths specifically include transport related deaths^{20,48}. Homicides include firearm related injuries, as well as assaults with either a sharp or blunt weapon. The findings of this study correlates with international studies where these are the leading causes of death in this category^{20,48}.

When comparing the suicides and natural causes of death to international statistics, these number of cases vary depending on the country in which the study was conducted^{20,36,48}. This is not surprising as each country has its own unique circumstances which contribute to death and it is thus not expected that statistics from across the world would be identical.

In this study the manner of death could not be determined in 27% of cases. This is slightly higher than the 18.7% to 24.5% as seen in international literature^{20,36}.

The leading cause of death amongst the unidentified deceased at the Pretoria Medico-Legal Laboratory was motor vehicle related accidents, specifically pedestrian vehicle accidents, accounting for 21% of deaths in the study group. This was closely followed by assault, with either a blunt or sharp weapon, and natural causes. Firearm fatalities represented only 4% of deaths among unidentified individuals. This is rather low considering the violent climate of South Africa and the fact that illegal guns are readily available.

A large proportion of abortions and stillbirths is also seen (20%). These bodies will however remain unidentified as the majority of them are non-viable, and as they are usually dumped in trash cans or at dumping sites, locating the mother of such an abortus is an unfeasible task.

Chapter 4

DISCUSSION

There are many legal, financial and social implications that stem from the number of unidentified bodies, not just in South Africa, but worldwide. The true extent of unidentified bodies at Medico-Legal Laboratory Facilities in South Africa is not known and the demographic characteristics of this population have also not been examined to date.

It is therefore imperative that research into this matter be conducted, that protocols and methodology be established in order to address the problems associated with unidentified bodies, and to limit the economic and social impact thereof.

4.1 Management of unidentified bodies in the global arena

Studies conducted into the phenomenon of unidentified bodies in various countries indicate that it is indeed a global problem.

A study conducted by Paulozzi et al. indicated that a total of 10 748 decedents remained unidentified in the United States over a 26 year period or roughly 413 unidentified bodies per year⁴⁸. Paulozzi et al. emphasize that studies into the epidemiology of unidentified decedents is of great value as additional information about the size and demographics of this population could help in designing and evaluating national tracking systems for such deaths, as well as measure the need for state of the art techniques, such as DNA analysis, for identifying unknown decedents⁴⁸.

To this end, Hanzlick and Clark from Fulton County, Georgia in the United States published a paper on a model national website registry for the unidentified deceased, as used by their office⁴⁹. This system was initially implemented in 1999 and further modified in 2002 to allow for the posting of additional information and images. Although the Federal Bureau of Investigation's National Criminal Investigation Centre already had an unidentified body component, this was not accessible to the public or other agencies that deal with missing persons. The Fulton County Medical Examiner office thus established the website in an attempt to remedy this problem.

Both medical examiners as well as the public would have access to the Unidentified Decedent Reporting System (UDRS) as created by the Fulton Country Medical Examiner office. Authorized medical examiners would receive a user name and password; allowing them to enter new cases, edit data in old cases and delete cases in which the individual was identified. Hanzlick and Clark recommended that each medical examiner's office have only one to two authorized users who would enter and edit information for that office, thus keeping the number of users to a minimum.

All information related to the unidentified body is then completed by the medical examiner on the demographics screen within the Unidentified Decedent Reporting System (**Figure 23, page 49**). This includes demographic data, body features, clothing and dental information. Photographs, where presentable, are also included to assist in the identification of the decedent.



Case Information: UID Case Number: 19

Case# (required): 03-2235 Status: Unidentified Reporting Agency: Fulton County ME

State: GA County: Fulton Contact Phone: 404-730-4400 send e-mail

Estimated Age: Adult - Pre 40 Race: African American Weight (pounds): 140 Measured

Minimum Age: 20 years Ethnicity: Height (inches): 67 Measured

Maximum Age: 40 years Sex: Male NCIC Number:

<< Back to Search Results Previous Save Next

Demographics Body Details Clothing, Hair, Eyes Dental Photos Report

Condition: Recognizable Face Probable Year of Death: 2003 GPS Coord. Where Found:

Date Found: 12/24/2003 Est. Post-Mortem Interval: days Address Where Found: Wooded area near Melvin Park in southwest Atlanta, 30331

Circumstances of Death:
Found unclothed and superficially burned in a Park where body had obviously been dumped. Has old gunshot wounds involving the right foot and left knee.

Figure 23. Demographics screen of the Unidentified Decedent Reporting System

The Unidentified Decedent Reporting System has been shown to be very user friendly with each case entry taking less than 10 minutes to complete⁴⁹. Thus, even in countries where the data of a large numbers of unidentified bodies may need to be loaded onto such a system, this is not an unfeasible task.

The public on the other hand would log into the system under a guest profile, allowing them to search the website for a specific individual using search criteria as selected by them.

UDRS UNIDENTIFIED DECEDENT REPORTING SYSTEM

Select the categories you wish to search and then select Next

Demographics	Bodily Features	Clothing / Hair	Forensic Details
<input type="checkbox"/> UDRS Case Number	<input type="checkbox"/> Amputations	<input type="checkbox"/> Clothing on Body	<input checked="" type="checkbox"/> Dental Data
<input type="checkbox"/> Case Number	<input type="checkbox"/> Deformities	<input type="checkbox"/> Clothing with Body	<input type="checkbox"/> Fingerprint Data
<input type="checkbox"/> Reporting Agency	<input type="checkbox"/> Scars	<input type="checkbox"/> Footwear	
<input type="checkbox"/> NCIC Number	<input checked="" type="checkbox"/> Tattoos	<input type="checkbox"/> Jewelry	
<input type="checkbox"/> State Found	<input type="checkbox"/> Piercings	<input type="checkbox"/> Head Hair	
<input type="checkbox"/> County Found	<input type="checkbox"/> Medical Implants	<input type="checkbox"/> Body Hair	
<input type="checkbox"/> Date Found*	<input type="checkbox"/> Foreign Objects	<input type="checkbox"/> Facial Hair	
<input type="checkbox"/> Est. Age Group	<input type="checkbox"/> Organ Absent	<input type="checkbox"/> Eye Color	
<input type="checkbox"/> Minimum Age	<input type="checkbox"/> Skeletal Findings		
<input type="checkbox"/> Maximum Age	<input type="checkbox"/> Prior Surgery		
<input type="checkbox"/> Age ±3 Years			
<input checked="" type="checkbox"/> Race			
<input type="checkbox"/> Ethnicity			
<input type="checkbox"/> Sex			
<input type="checkbox"/> Height**			
<input type="checkbox"/> Weight***			

Next

*All cases found on or after the entered date will result in a match.
**Cases within plus or minus 2 inches of your entry will be considered a match.
***Cases within plus or minus 20 pounds of your entry will be considered a match.

Case Log
Search
Most Recent Search
Logout

User QuickTips (PDF)

Figure 24. Search criteria of the Unidentified Decedent Reporting System

A follow up study on the usefulness of such a system for making identifications and locating next of kin was conducted by Hanzlick in 2004⁵⁰. The study indicated that 60% of the web site usage had been by employees, while the remaining 40% were from other domains which included various search engines and some URLs that could be identified as belonging to agencies that deal with missing persons. The web site thus plays a crucial role in reducing the number of unidentified bodies at Medical Examiners Offices' in the United States⁵⁰.

The Unidentified Decedent Reporting System as discussed above was modified and incorporated into the National Missing and Unidentified Persons System (NamUS) as the unidentified decedent component. NamUS is a joint project between the National Institute of Justice and the National Forensic Science Technology Centre and was designed to facilitate the work of the diverse community of individuals and organisations who investigate missing and unidentified persons. It crosses all borders of states, counties, municipalities and precincts and therefore plays a valuable role in the identification of unknown decedents⁵¹.

Mexico has also adopted a database to assist in the identification of the unknown deceased that die whilst crossing the border into the United States⁵². The database compares the description of a missing family member with the estimated 2.5 million identity cards that have been issued to Mexican nationals in the United States. In the event that a likely match is obtained, the database can be used for the comparison of DNA samples from the missing person and a maternal relative⁵².

Before the existence of the database, it was almost impossible to find a missing Mexican citizen in the United States if the person had not been hospitalized or imprisoned. The current system allows families to log into the database via kiosks located in Mexican Government offices. The relatives then provide physical characteristics of the missing person, including height, weight, hair colour, any missing teeth, moles and the clothes they were wearing when last seen⁵².

Families are also able to submit a DNA sample which can then be compared to the DNA samples submitted to the database by medical examiners throughout the United States. This has been the hard work of Dr. Lori Barker who has worked for three years to build her own catalogue of DNA samples from unidentified corpses found in border areas. The system has found to be effective, identifying four bodies in its first three months of operation⁵².

An estimated 10 000 – 14 000 cadavers remain unidentified in Brazil each year. Brazil, like many other countries, does however not keep statistics on the official number of unidentified deceased. A study conducted in 2007 determined that there were 7 287 cadavers that had not been identified in five Brazilian states³⁷. In order to help solve this problem, da Silva et al. developed a bioinformatics tool in order to register and compare both genetic and non-genetic information from missing persons, relatives of missing persons, unidentified cadavers and human remains³⁷.

The genetic comparison is made with autosomal and Y-chromosomal STR markers. The system makes a pair wise comparison, and then calculates the likelihood ratio and probabilities of a relationship; including that of a parent, child, sibling and second degree relative; using an algorithm based on the heterozygosity of the markers. The system can compare and integrate the resulting genetic information, either online or offline, making it ideal for developing countries in which internet connectivity may be a problem³⁷.

Testing of the system indicated that genetic profiles from biological relatives were ranked correctly and no false positive associations were found³⁷. Such a system could thus play a vital role in reducing the number of unidentified deceased within a country.

In 1999, Spain implemented a national program in an attempt to identify cadavers and human remains which could not be identified by the use of traditional forensic approaches. The program was called the Phoenix Program and consisted of two independent mitochondrial DNA (mtDNA) databases – the Reference Database and the Questioned Database⁵³.

The Reference Database contained mtDNA sequences from maternal relatives of missing persons who provided their samples voluntarily, and the Questioned Database comprised the mtDNA data of unknown remains and cadavers. This system was necessitated by the fact that there are more than 1 500 cadavers and unidentified remains in the European Union⁵³.

Since the implementation of the system, more than 1 200 families have contacted the Phoenix Program and at least 280 reference samples and 48 questioned samples have been analyzed. Although this does not seem like a notable feat, during the first eight months of the Phoenix Program six cases have been solved. The Program is still however in its early stages and it is hoped that with time the increase in the number of Questioned Database samples compared to that of the Reference Database samples, will result in a larger percentage of cases being solved⁵³.

Studies conducted in Italy indicated that on average 17% of cases admitted morgues in Milan remained unidentified²⁰. In order to find an interim solution for managing unidentified decedents, the Milan University Institute of Legal Medicine has for the past 14 years published, with the investigating authorities, biological profiles of all unidentified decedents on the University website which is accessible to all. This project was undertaken by the Milan University Institute of Legal Medicine as no national database of unidentified decedents, to which missing person profiles can be compared, is available in Italy²⁰.

The true magnitude of the problem in Italy was only discovered when it became apparent that many of the unidentified decedents on the system had repeatedly been reported as missing, but remained unidentified due to the lack of a national database of unidentified decedents. It was then that political bodies were approached to find solutions to this problem and a proposed law to establish a common national registry for missing persons and unidentified decedents was debated by the Italian Parliament²⁰.

In France between 1 000 and 3 000 cadavers are buried as “X” or unidentified bodies each year³⁶. Studies into the identification methods used during forensic investigations indicated that 10.2% of bodies remained unidentified after all possible methods of establishing their identity was exhausted. The study also highlighted the fact that a large number of bodies in France are identified by non-scientific means alone, without being verified through scientific means and that this should be of great concern³⁶.

4.2 Management of unidentified bodies in South Africa

The number of unidentified bodies present at Medico-Legal Laboratory facilities in South Africa is not known. No such data is formally collected by any agency or body within the country. The only available statistics indicate that between January 2010 and August 2010, 846 bodies remained unidentified and unclaimed at mortuaries in Gauteng alone⁵⁴.

There are many problems which are encountered when dealing with unidentified bodies in South Africa. Although many factors contribute to this, the movement of the operational management of Medico-Legal Mortuary facilities from the SAPS to the Department of Health cannot be excluded. Many of the functions initially performed by the South African Police Service now fall within the realm of the Forensic Officers employed by the Department of Health.

The investigation into the death of a person is thus no longer handled by a single agency but involves the cooperation of multiple government departments. The initial scene investigation is the responsibility of the SAPS, with the Forensic Pathology Service responsible for collection of the body and the subsequent autopsy examination.

It is here that many problems are encountered as there is no Service Level Agreement between the SAPS and the FPS regarding the specific functions to be performed by each. Investigation into the identity of an unknown body at a Medico-Legal Laboratory facility often falls by the wayside as Investigating Officers no longer collect data that may assist in identification, nor do they complete the SAP 55 B form which is to be submitted to the Bureau for Missing Persons in order to obtain a probable match to a reported missing person.

Chapter 5

RECOMMENDATIONS

5.1 Establish the true nature of the problem

The extent of unidentified bodies at Medico-Legal Laboratories in South Africa is unknown, with the last study conducted in this field of research published in 1998²⁷. It is thus necessary that studies similar to the one conducted at the Pretoria Medico-Legal Laboratory be undertaken at Medico-Legal Laboratories across the country to determine the extent of the problem nationally.

Unidentified bodies are however not only present in the forensic setting. The extent of unidentified bodies that die in a hospital setting from natural causes must also be ascertained, as they too contribute to the total number of unidentified bodies in South Africa that are eventually buried at the cost of the Government.

Considering that the majority of the South African population die within a hospital setting, it will be beneficial to perform a survey across all hospitals and medico-legal institutes nationwide requesting the number of unidentified decedents present at each institution²⁰.

5.2 Draft and implement new legislation

The Regulations Regarding the Rendering of Forensic Pathology Service¹⁸ governs the autopsy process and contains specific instructions when dealing with unidentified bodies. The Regulations state that it is the responsibility of the attending authorized person (the pathologist) to ensure that all appropriate identification criteria is recorded. The pathologist must further ensure that adequate and scientific methods are utilized to identify bodies that cannot be reliably identified by routine methods.

From the outset, close attention should be paid to the collection of all relevant information which may be useful for the reliable identification of the deceased. This would include appropriate recording of personal documents, identity documents, jewellery and adornments, as well as pertinent information regarding the circumstances and scene of death.

Any special identifying features such as scars, tattoos, dentition and deformities must be described. This is especially important in instances where a body has not been positively identified. Pathologists often tend to neglect this important step, with the identifying features recorded in the majority of post mortem reports having little value in assisting in establishing the identity of an unknown body.

The Regulations¹⁸ further state that colour photographs as well as all fingerprints of bodies, whether identified or not, admitted to Medico-Legal Laboratory facilities must be taken. Where relevant photographs of appropriate items which may assist in the identification of the deceased must also be taken.

In the event where visual and/or fingerprint identification is not possible the following scientific procedures must be followed:

- recording of post mortem dental information visually and radiologically;
- obtaining tissue from the body for DNA comparison; and
- obtaining skull and/or facial sinus x-rays, where possible.

It is the responsibility of the SAPS investigating officer of the case to continue with the arrangements for the collection of appropriate samples for comparative DNA analysis, as well as to continue with investigating the circumstantial and medical history of the deceased such as obtaining dental records, medical, radiological and laboratory records, photographs etc, to enable the pathologist to make a scientific identification.

If a body has not been identified within seven days the fingerprints taken at admission are submitted to the South African Police Criminal Record Centre (CRC) and to the Department of Home Affairs. At this stage a specimen for DNA analysis is also collected and the body moved to a freezer at the facility.

Additional scientific methods may be used to further facilitate identification but is done at the discretion of the pathologist involved in the specific case.

If problems are experienced in identifying a body, the help of the broadcasting services and/or print media may be sought. A clear photograph (if presentable) and full report is submitted to the media and must contain information on how, where and when the body was found; as well as a full description of the clothing, scars and tattoos on the body or any other special identifying feature.

If after 30 days a body has still not been identified, the body is declared “unidentified and unclaimed” and the process started for burial or cremation of the deceased as a pauper. However, no unidentified body may be disposed of before the fingerprints, photographs and specimens for DNA analysis have been taken. The fact that a large number of unidentified bodies are being cremated instead of buried due to a shortage of land in South Africa, makes it pertinent that all steps be taken to identify bodies at Medico-Legal Laboratory facilities.

Although it appears that The Regulations Regarding the Rendering of Forensic Pathology Service¹⁸ extensively covers the procedure to be followed when dealing with unidentified bodies there are still many shortfalls in the current legislation which should be improved.

Completion of a form similar to the SAP 55 B form must be compulsory for all instances in which a body remains unidentified. This form must be submitted to the Bureau for Missing Persons in order to establish whether such a person was reported missing by his or her loved ones.

Legislation governing this function should be drafted and implemented as soon as possible and include the following:

- who will be responsible for completing this form;
- the manner in which the form is to be completed; and
- the process to be followed once the form has been completed.

5.3 Establish specific protocols

Currently no national protocols exist when dealing with unidentified bodies. Although regulated by the Regulations¹⁸, each mortuary handles unidentified bodies in their own manner, with only some mortuaries performing additional investigations in order to establish the identity of an unknown body.

In an attempt to reduce the number of unidentified and unclaimed bodies at the Medico-Legal Laboratory in Pretoria, the Facility has established a line of direct communication with the Bureau for Missing Persons. Currently only information regarding unclaimed bodies is submitted to the Bureau for cross-referencing with their Missing Persons Database. It is hoped that this will result in a match and lead to positive identification. To date however, this has not been successful.

It is hoped that in future, all data on unidentified bodies at Medico-Legal Laboratory Facilities in South Africa be submitted to the Bureau for Missing Persons for cross-referencing.

The interdepartmental cooperation as discussed above is however not common practice.

Any investigation regarding missing persons and unidentified bodies relies on the combination of a focused and dedicated investigation unit that has capacity, good research skills and specialised forensic skills²¹. Interdepartmental coordination and collaboration is thus key in reducing the number of unidentified bodies at Medico-Legal Laboratories in South Africa.

As no formal protocols exist when dealing with the unidentified deceased, and comparing them to missing persons' profiles, these should be established. This will involve coordination between the Department of Health, the SAPS and the Bureau for Missing persons who are all affected by this phenomenon. Areas that will need to be addressed include the exact process to be followed in such instances, as well as the roles and responsibilities of each organization. Clear lines of communication must also be established between all Government Departments and other parties involved.

The process of identification at Medico-Legal Laboratories will also have to be scrutinized and where necessary adjusted or new protocols implemented. In South Africa however, the identification protocols will have to be cost-effective as forensic laboratories are few, DNA testing is expensive and time-consuming, the waiting list for DNA testing relating to criminal cases is long, and the number of unclaimed bodies is high²¹.

It is suggested that if a body remains unidentified at a Medico-Legal Laboratory Facility, an identification form be sent to the pathologist who conducted the autopsy. Demographic data, as well as any relevant information which may assist in the eventual identification of the deceased must be recorded on this form and returned to the Facility. (Annexure A) The form must then be forwarded to the Bureau for Missing Persons in order to establish whether such a person may have been reported missing by his/her loved ones.

It is also suggested that in cases of unknown decedents, the pathologist or investigating officer should check with appropriate law enforcement officials of the jurisdiction and surrounding jurisdictions for missing person reports which may match the decedent's description⁵⁵. However, considering the number of unidentified decedents at Medico-Legal Laboratory facilities in South Africa, this is a nearly impossible task and will be better undertaken by a special task team employed for this purpose.

5.4 Implementation of Death Investigators

The Forensic Pathology Service in South Africa currently employs a number of pathologists and Forensic Officers that are responsible for the conducting of post mortem investigations and assisting in the identification of the deceased. The number of forensic pathologists in the country is however limited with only a few being schooled in the science each year.

Forensic Officers are however not required to have any formal qualifications relating to death investigation. There is also no formal training available which can be provided to these Forensic Officers prior to employment. This means that they receive only “on the job” training by people who do not have any qualifications in this area themselves. The knowledge that they thus have, has been acquired through performing the obvious aspects of the position, but will not necessarily extend to the finer details of the training needed to perform the task to its full requirement.

There is thus an obvious need for establishment of a training program which will cover all aspects of death investigation which will be relevant to Forensic Officers in performing the various duties entailed in their job description.

It is also suggested that Death Investigators be employed at each Medico-Legal Laboratory facility. These Death Investigators will be personnel who have been trained in the various aspects of death investigation, including the following:

- a working knowledge of the statutes which govern the conducting of post mortem investigations;
- a background in anatomy and physiology;
- an understanding of the relevant information required in each case that will assist in establishing the cause of death;
- a thorough knowledge of the autopsy process; and
- a familiarity with the judicial system.

Such individuals would be of immense value to the Forensic Pathology Service and could play an important role in assisting in the identification of unidentified bodies by acting as liaison officers between the Forensic Pathology Service, the SAPS and the Bureau for Missing Persons. Appointing such individuals to specifically deal with unidentified bodies at facility level, could greatly facilitate the process of establishing a possible identity for an unknown body.

The need to train such individuals is also not an immediate one, as there are many people who have already completed qualifications in the Medical Sciences and subsequent qualifications in Medical Criminalistics at Universities throughout South Africa, and who are struggling to find employment within the realm of death investigation.

The use of such individuals in the mortuary setting as well as in the establishment of a special task team to compare missing persons with unidentified bodies or remains, must not be underestimated.

5.5 Creation of an Unidentified Decedent Database

Numerous problems are experienced when attempting to identify the deceased and these are not limited to developing countries alone. Many countries do not have a national database of unidentified decedents and also have no obligation to keep track of such decedents²⁰. In instances where such databases are available, these are often fragmentary and contain very little detail.

The lack of homogenous recording systems for unidentified decedents, as well as the lack of a properly organised database which should match such decedents to a missing person counterpart, further exacerbates the problem²⁰.

The Federal Bureau of Investigation's National Crime Information Centre relies on the voluntary reporting of unidentified decedents, but databases deriving from such passive reporting systems may miss many cases of unidentified decedents²⁰. Medical examiners in the United States have also indicated that they have neither the time nor the resources to enter missing persons and unidentified human remains data into the systems³⁴.

The NCIC and other federally operated systems are also not readily accessible to, or searchable by persons such as medical examiners, coroners, and other members of the public who need the information, making it unlikely that the maximum number of unidentified deceased will be identified by such a system.

Currently, no procedure in which missing persons' profiles are matched with unclaimed bodies seems to exist in South Africa²¹. This is alarming considering the number of unidentified deceased at mortuaries in this country. Staff shortages and the lack of proper training of investigating officers within the South African Police Service may further contribute to not as many bodies being identified as should be.

Though efforts were made by the Gauteng Department of Health in 2007 to establish their own national database of unidentified and unclaimed bodies, the website was discontinued in its initial phase due to administrative problems. In 2008 an attempt was made to revive the project; however the website never went live due to numerous problems that were identified during the testing phase⁵⁶.

The Forensic Pathology Service Missing Persons Website

Although the website was intended to contain information on unidentified decedents at Medico-Legal Laboratory Facilities in South Africa, a decision was made to call it the Forensic Pathology Service (FPS) Missing Persons Website. This decision was taken by the committee involved in its development because the public who would utilize the site, still consider their loved ones missing even though they may already be deceased. The Service thus did not want to cause any unnecessary trauma to the already bereaved family members.

According to the original design of the website three different users were identified. Administrators were responsible for the loading of unidentified decedent information onto the website and could add, delete or alter data contained within the site. A normal user, in this case the Forensic Officers employed at the various mortuaries, would only be able to conduct a search and view pictures attached to a specific reference number on the website. The public would log into the site under a citizen profile and would only be able to search and obtain results, without being able to view any pictures.

Once a search has been conducted by a family member and corresponding results obtained, the member of the public would then be instructed to go to the nearest Medico-Legal Laboratory Facility with the relevant Death Register (DR) number as reference. A list of all Medico-Legal Laboratory Facilities along with their contact details and addresses was available on the website for this purpose. At this facility a designated user would then assist the family member in viewing the pictures attached to the reference number in order to make a positive visual identification.

Many objections and much dissension between the parties involved was however initially experienced regarding the loading of pictures onto the website, with many stating that it is inappropriate for the public to be able to view such pictures. As a result, viewing of pictures required an additional password and could only be viewed from designated computers within the various Medico-Legal Laboratories.

It was envisaged that once it had been established that the website was stable and functioning adequately, it would be expanded to grant the SAPS and Bureau for Missing Persons access to the website. They would thereby be able to assist members of the public who do not have access to the internet in finding their loved ones. The police officers would thus aid members of the public in conducting a search for their missing loved one and refer them to the closest Medico-Legal Laboratory should a result be obtained.

Numerous problems were however encountered with the initial website. As it was a web based service, its functionality relied on the server running the website, located at the Gauteng Shared Service Centre, being available at all times. This was however not the case, with the server often being down for three or more days during the week. Thus during the period in which the server was unavailable, no access to the website could be gained in order to add data or to search for missing individuals.

The initial design of the website also did not filter the search results obtained from the website according to the information entered. Even though specific search criteria were entered, the list populated by the site included all records loaded onto the website by all Medico-Legal Laboratory Facilities up to that stage. Thus finding the correct body and reference number was an almost impossible task.

The design and layout of the initial website also left much to be desired. Although intended for use by the public, with a large number of South Africans being illiterate, the simple design of the website looked like nothing more than a school project.

In spite of extensive reviews and the submission of recommendations to correct these faults, no progress has been made. The website was eventually discontinued and removed from the internet altogether. The designated address for the website now redirects the user to the Gauteng Department of Health's web page.

Since then no efforts have been made to resurrect this project or to address the problem of matching unidentified bodies with missing persons. However, doing so will require a dedicated team, adequate funding and cooperation between the public and private sector.

A Model Unidentified Decedent Database

The International Committee of the Red Cross (ICRC) recommends that governments establish and manage a single central database at national level with the aim of centralizing identifiable information on missing persons and unclaimed deceased persons²¹. Processing of information for both deceased and missing persons must thus be undertaken at a single central point by task teams employed to collect relevant information that can be useful in identifying the deceased²¹.

A specialized unit which will be responsible for maintaining this database must thus be established. The unit will be involved in the search for missing persons and relating them to unidentified bodies, the conducting of investigations, and the collection of essential identifier information.

It is important that the staff within this unit be trained in this field and have an understanding of the information that is required to assist in identification. This will include an understanding of which medical records are useful and where they can be found; the significance and value of x-rays, photographs and physical body characteristics; as well as that of clothing and other personal effects²¹.

It is also recommended that a web-based community or public accessible National Missing and Unidentified Persons System, dealing with missing persons and unidentified deceased, be established. It is envisaged that such a website would function as a “one-stop” data system for all participants involved in the investigation of missing and unidentified deceased persons. Widespread use of such a system could facilitate the location of missing persons who have died, and the identification of deceased persons whose names and identities are unknown.

The ultimate objective of such a programme will be to promote and facilitate the consistent collection of data, as well as establishing sharing protocols amongst the various role players that would be involved in such a programme. However, uniform collection, reporting and sharing of critical data regarding missing and unidentified persons can only be reached if such a project succeeds in implementing a dissemination strategy that:

- (i) identifies and organizes all the primary stakeholders and user groups;
- (ii) creates and trains a network of individuals willing and able to deploy this system;
- (iii) enlists the support of investigative agencies both locally and nationally; and
- (iv) partners with the institutions whose responsibility it will become to sustain such research by educating and training the next generation of investigators.

In order for such a system to be effective, representatives from the various stakeholder organisations will have to be nominated to participate in the initiative. These representatives will include the following:

- a Law Enforcement representative,
- a Medico-Legal Death Investigator representative,
- a Missing Persons representative,
- a Forensic Science representative, and
- a Victim Advocate representative.

The Law Enforcement representative

The Law Enforcement representative should be an officer employed by the South African Police Service and must have experience in the investigation of missing persons.

Medico-Legal Death Investigator representative

It is recommended that this post should be filled by a pathologist. However, due to the large number of unnatural deaths, as well as the fact that many of the pathologists are also employed by universities throughout South Africa, this is an almost impossible request.

It is therefore recommended that this post rather be filled by a Forensic Officer employed by the Department of Health. Such an officer should however have sufficient experience in the area of medico-legal death investigations and should ideally possess a qualification in this regard.

Missing Persons representative

This position will be filled by an employee of the local or provincial government agency responsible for the evaluation and distribution of missing persons' data. Experience in the field of missing person investigations will be required.

Forensic Science representative

The Forensic Science representative is an expert in his/her field of forensics which may include criminalistics, odontology, pathology/biology and physical anthropology. The representative must have knowledge of various scientific identification techniques including DNA analysis, fingerprinting techniques, and the use of dental and radiographic applications in the identification of missing persons and the unidentified deceased.

The Victim Advocate representative

The Victim Advocate representative is a paid or volunteer member of at least one of the recognized non-profit provincial or national missing persons organisations.

A system based on these principles should greatly assist in reducing the number of unidentified deceased at Medico-Legal Laboratories in South Africa.

5.6 Creation of a national DNA database

DNA profiling allows for quick identification of serial crimes, earlier arrests, valuable intelligence, exoneration of innocent suspect and the identification of bodies. The value of implementing a national DNA database must therefore not be underestimated, as it will have a significant impact on both crime and the identification of unknown bodies.

South Africa does in fact currently have a National DNA Database (for Criminal Intelligence) which holds the DNA profiles of certain suspects arrested and thereafter convicted for recordable offences, and DNA profiles collected from crime scenes³². There is however no specific legislation which regulates the existing DNA database, with section 37 of the Criminal Procedures Act (Act 51 of 1977)⁵⁷ being the only statutory provision that deals with the ascertainment of bodily features of an accused.

Thus the Criminal Law (Forensic Procedures) Amendment Bill, also called the DNA Bill, was drafted and adopted by Cabinet in December 2008. The DNA Bill seeks to address the gaps in the current legislation dealing with the collection, storage and use of DNA evidence and to provide for the expansion and administration of a national DNA database, which will be called the National DNA Database of South Africa (NDDSA)³².

The DNA Bill addresses the following issues:

- all aspects of biometric evidence, especially the use of DNA profiles for criminal intelligence purposes;
- expansion and upgrading of the existing DNA database within the South African Police Service; and
- management and administration of a NDDSA to include all suspect and crime scene profiles.

The DNA Bill aims to achieve these objectives while providing for strict safeguards and penalties to ensure that forensic materials are collected, stored and used only for purposes related to the detection of crime, the investigation of an offence or prosecution. The DNA Bill also ensures that the NDDSA is used to its full potential in combating and preventing crime in South Africa, while ensuring that it has minimal impact on the civil rights of citizens³².

It is not known when the legislation will be passed. The Criminal Law (Forensic Procedures) Amendment Bill was reintroduced to Parliament in the National Assembly on 7 July 2009. The Bill was referred to the Portfolio Committee on Police for review and review of the DNA Bill continues to this day, with the Committee indicating that it first wanted to embark on a tour of the United Kingdom and Canada to see how DNA databases are being implemented in these countries³³.

The urgency of the DNA Bill has been emphasised from the early stages and with the support of the DNA project, the National Prosecuting Authority, Business Against Crime, the South African Human Rights Commission and Popcru, the DNA Bill should be prioritised.

The envisaged NDDSA will consist of five different indexes:

- The Crime Scene Index, containing DNA profiles collected from crime scenes;
- The Reference Index, containing samples from persons suspected, reported, charged or cautioned for any recordable offence;
- The Convicted Offender Index, containing DNA profiles of convicted offenders;
- The Elimination Index, containing DNA profiles of people working in the collection and analysis of forensic samples; and
- The Volunteer Index, containing DNA profiles of victims as well as persons requesting their profiles to be kept on the database.

The DNA Bill will therefore play a major role in the identification of unknown bodies at Medico-Legal Laboratory Facilities throughout South Africa. The cost of implementing such a system is an estimated R7.5 billion which will be spent on obtaining reference samples from private laboratories, building the SAPS crime scene and reference sample capacity, as well as expanding the SAPS fingerprint database and the linking thereof to the fingerprint databases at the Department of Home Affairs and the Department of Transport³³.

There are however concerns regarding the readiness and capacity of the South African Police Service to implement and maintain such a database. As the database involves the cooperation of many departments, the success thereof will be dependant there upon.

5.7 Cooperation at international level

Missing persons and unidentified remains constitute a global problem, with the true nature of this entity still poorly known in most countries around the world.

The need for the undertaking of collaborative research and cooperation between countries that face this problem cannot be disregarded. An essential first step would be to communicate with the relevant departments that deal with the problem in other countries and to establish discussion groups to endeavour to establish the extent of the problem worldwide. This may then be extended to research and recommendations as to how the problem can be addressed and protocols established to manage the problem.

Clearly, the research is essential and the importance thereof in South Africa and in the international community should not be underestimated. Although the cost of the research will not necessarily be prohibitive, governments should be made to realise the importance of such research and should provide sufficient funds to conduct the research properly and efficiently.

Furthermore, once the research has been completed and protocols for addressing the problem have been established, the cost of implementing the proposals should also be borne by the respective government in each country. This is justified in view of the cost savings in respect of the current un-coordinated search for identities of deceased persons, pauper burials, and recordkeeping of unidentified bodies.

Chapter 6

CONCLUSION

Unidentified bodies in the forensic setting constitute a global problem. Though this should be of great concern to many governments, very little data on the extent of this phenomenon is available in international literature and few countries require that statistics on the number of unidentified deceased be kept.

To determine the extent of this phenomenon in South Africa a study into the number of unidentified deceased at the Pretoria Medico-Legal Laboratory, and their demographic profile was undertaken. The study has indicated that between 7% and 10% (154 – 250) of bodies remain unidentified at the Medico-Legal Laboratory in Pretoria and publications indicate that a total of 846 bodies remained unidentified at Medico-Legal Laboratories in Gauteng for the period January 2010 to August 2010.

When considering the fact that this is the number of unidentified bodies at Medico-Legal Laboratories in Gauteng over an eight month period, extrapolating such data to mortuaries around the country, leads to a overwhelming number. Unidentified bodies therefore constitutes a great problem in South Africa, as the statistics as seen in the Gauteng province are almost double of that seen in other countries around the world as a whole.

Of greater concern still is the fact that these statistics do not include those cases in which persons die in hospital facilities from natural causes with no identity, which are not referred to the Forensic Pathology Service for investigation. The true extent of the problem may thus be far greater than imagined.

Considering the fact that these unidentified bodies have a substantial social and economic impact, the need to draft legislation for dealing with unidentified bodies, to establish protocols and implement Unidentified Decedent and DNA databases, is apparent.

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IDENTIFICATION ANNEXURE

1. Case information

DR number: _____ / _____

Area found: _____

2. General description

Race _____

Height _____

Age _____

Build _____

Sex _____

Hair colour _____

Description of clothing

3. Does the person have any of the following?

2.1 A beard or moustache? Yes No

If yes, please describe

2.2 Artificial body parts or aids? Yes No

If yes, please describe

2.3 Deformities? Yes No

If yes, please describe



2.4 Previously fractured bones? Yes No

If yes, please describe

2.5 Implanted medical devices? Yes No

If yes, please describe

2.6 Missing body parts or organs? Yes No

If yes, please describe

2.7 Moles? Yes No

If yes, please describe

2.8 Scars? Yes No

If yes, please describe

2.9 Piercings? Yes No

If yes, please describe

2.10 Tattoos? Yes No

If yes, please describe

2.11 Skin discolorations, including birthmarks? Yes No

If yes, please describe



2.12 Dentures, dental work or dental deformity? Yes No

If yes, please describe

2.13 Distinguishing jewellery? Yes No

If yes, please describe

Additional comments
