

***Pilot study: Investigating the chemical composition of illegal drugs and the associated prevalence of the different drug types in the Bellville and Athlone police districts in the Western Cape, South Africa***

**A RESEARCH DISSERTATION BY:**

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# 1. DECLARATION

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## 2. ABSTRACT

*Very little chemical information is known about substances being abused in South-Africa. This can be attributed to the fact that possession of drugs constitutes a criminal offence. Not much research is done, and with the exception of self-reported, rehabilitation institution data, from the South African Community Epidemiology Network on Drug Use (SACENDU) and the South African Police drug related arrest data, no other data on drugs and drug use, is publically available.*

*Drugs are being manufactured from legal and illegal chemicals in clandestine laboratories, not complying with any health, safety or quality standards causing a serious health risk in communities. The strategy for the fight against drug abuse in South Africa, the National Drug Master Plan 2013-2017 (NDMP), is compiled by the Central Drug Authority (CDA). Without proper research, data to base decisions and strategies on and proper measuring of achievements, the implementation of the plan suffers as a consequence. The Forensic Science Laboratory (FSL) of the South African Police Service (SAPS), is responsible for the chemical testing of substances, suspected of being illegal drugs, for identification purposes. This supports the prosecuting of suspects during criminal procedures. With the active ingredient known, the use of street names e.g. Tik, Choef or Speed (all referring to methamphetamine) can be abandoned and confusion and misconceptions eliminated.*

*This pilot study investigates the arrest data, in combination with the charge laid against the arrestee and the chemically identified active ingredient in each case. Arrest data revealed a 400% increase in drug related arrests over the last 10 years, while the NDMP requires a 10% decrease. It further highlights the fact that the measurement of success (number of arrests) in the SAPS, resulted in a focus on arresting persons in possession of drugs. The dealers and manufacturers were not adequately addressed and prevention, through chemical monitoring, suffered as a result.*

*This study also clearly revealed that international trends are not a definite indication of the extent and type of drug abuse in South African Communities. The study further attempts to contribute, and to better describe the situation of drugs and drug abuse in communities. This*

*in turn, will provide data to develop evidence based strategies, designed to meet the defined needs of communities, one of the aspects highlighted by the minister in the NDMP, namely an intervention based on reality and local statistics. It is therefore clear that a scientific understanding of the composition of abused substances can direct treatment, policy, prevention measures and provide intelligence to combat drug abuse and illegal drug manufacturing in South Africa.*

*Looking at the analysis data in Bellville, in 2013, the main contributor to drug arrests are due to the possession of cannabis (38,8%) with methamphetamine second (21,7%) followed by cathinone (11,6%). Interesting to note is the difference between Bellville and Athlone when it comes to Cannabis and Methamphetamine from 2013 to 2014. Bellville experienced a decrease in Cannabis but an increase in methamphetamine with Athlone just the opposite, reporting a cannabis increase and methamphetamine decrease. Compared to the international trends, Bellville experienced the increase in methamphetamine but not the increase in cannabis while Athlone experienced the increase in cannabis but not the increase in methamphetamine. Something to note is the high prevalence of methaqualone (not even monitored or reported on in the World Drug Report).*

*Worth mentioning is the lack of policing of the medicine act. It is clear that the current measurement of success in the South African Police Service (amount of drug arrests), moves the focus from preventing drug abuse by supply reduction, (focus on dealers and manufactures) to achieving of goals (making a predetermined amount of arrests). The misuse of over-the-counter and prescription drugs like benzodiazepines is common, yet only 2 arrests in 2013 in Bellville has been reported. Not a single case of pre-cursor control has been mentioned in any of the reported or analysed data. Noteworthy is the increase in cases, not being analysed at the laboratory, from 2013 to 2014 at Athlone. This is a direct reflection on the type of arrests and/or the investigation done in the cases.*

*It is clear that international trends are not a definite indication of the extent and type of drug abuse in South African communities. Legislation and the NDMP clearly stipulate the strategy, goals and desired impacts. Clarity is however needed regarding who exactly is responsible for which outcome and where are the finances to achieve the desired outcomes? Success measurements to monitor and evaluate must be developed. Consequences and actions for non-compliance or non-achievement of goals must be clearly visible and enforced.*

### 3.

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**4.**  
**PART A**  
**RESEARCH PROTOCOL**

## **4.1 INTRODUCTION**

### **4.1.1 The research problem.**

Very little chemical information is known about substances being abused in South-Africa. This can be attributed to the fact that possession of drugs constitutes a criminal offence. Drugs are being manufactured from legal and illegal chemicals in clandestine laboratories, not complying with any health, safety or quality standards. It is therefore clear that a scientific understanding of the composition of abused substances can direct treatment, policy, prevention measures and provide intelligence to combat drug abuse and illegal drug manufacturing in South Africa.

### **4.1.2 Rationale, justification or purpose of the study.**

The Forensic Science Laboratory of the South African Police Service (SAPS), in Cape Town is responsible for the chemical testing of substances, suspected of being illegal drugs, for identification purposes. This supports the prosecuting of suspects during criminal procedures. The chemical compositions of drugs are being identified using Gas-chromatography Mass Spectrometry (GC-MS), Fourier Transform Infrared Spectroscopy (FT-IR) and Ultra High pressure Liquid chromatography (UPLC). With the active ingredient known e.g. methaqualone, cocaine, di-acetyl morphine or methamphetamine, the use of street names e.g. Tik, Choef or Speed (all referring to methamphetamine) can be abandoned. Add to this geographical information, dimensions, colour and volume, and a valuable source would be available for not only profiling, but also to give an indication of the type of problem in different communities. If this information is known, specialised community based interventions, for specific problems, can be implemented.

### **4.1.3 The aims and objectives of the study.**

The primary aim of the study would be to chemically analyse drugs confiscated by the SAPS in the Northern- and Western Cape during a 3 month period and construct a database of all Information including geographical and scientific data.

The secondary goal would be to provide information for:

- The gathering of intelligence to enable prosecution of the manufacturers of drugs.
- The creation of specific tailored community based interventions to prevent the illegal selling/manufacturing of drugs.
- The creation of community specific health interventions to reduce the bio-psycho-social and economic impact of substance abuse and related illnesses in communities (Department Social Development Central Drug Authority, 2013).

#### **4.2 PROTOCOL LITERATURE REVIEW**

Drugs are regulated in South Africa with two Acts of Parliament; Act 101 of 1965 (Medicines and related substances Act) and Act 140 of 1992 (Drugs and Drug Trafficking Act). The strategy for the fight against drug abuse is compiled by the Central Drug Authority (CDA), under the guidance of the Department of Social Development (Department Social Development Central Drug Authority, 2013).

The National Drug Master plan (NDMP) has as an outcome: “Ability of all people in South Africa to deal with problems related to substance abuse within communities (Department Social Development Central Drug Authority, 2013). Policy and intervention planning is currently mainly done by relying on self-reported data and not scientifically tested data. This is mainly because testing is extremely expensive. The main source of data in South Africa is generated by the South African Community Epidemiology Network on Drug use (SACENDU). This initiative was established in 1996 by the South African Medical Research Council (MRC) (Sacendu Project, 2014).

The NDMP calls for the “Development and implementation of multi-disciplinary and multi modal protocols and practices for integrated diagnosis, and treatment (Department Social Development Central Drug Authority, 2013). The use of data generated by the South African Police Forensic Science Laboratory for criminal prosecution should therefore be available to other government departments to guide

policy and intervention strategies and broaden the general knowledge on substance abuse.

Common misconceptions are created in the media because of the use of “street names”. Scientific and/or legal descriptions of drugs are rarely used. Recently the “WOONGA” drug was described as new and dangerous. This was nothing other than “di-acetyl morphine” or heroin. Heroin was first harvested in Mesopotamia 3400 BC (Best Drug Info, 2010).

The World Health Organization, in its book “Strengthening Health Systems: The Role and Promise of Policy and Systems Research” (Alliance for Health Policy and Systems Research, 2004) provides important findings including that:

- The lack of research can lead to undesirable results.
- Research can contribute most when issues are formulated through clear and empirical verifiable hypothesis.
- Only 5% of total publications on health systems worldwide focus on developing countries.
- Stakeholders support different priorities while critical problems are not targeted.

Closer to home, the Western Cape Government in their Drug Master Plan 2012 to 2016 recognised the fact that a balanced approach is needed to deal with the problem of substance abuse. Their focus is on demand-, supply- and harm reduction (Western Cape Provincial Government, 2011). The main focus, as advocated by the World Health Organisation (WHO) and the United Nations Office on Drugs and Crime (UNODC) is on “primary prevention”, a strategy based on preventing dependants from becoming dependants in the first place.

The UNODC recognised the roll of research and the need for scientific chemical testing of drugs in its 2014 World Drug Report, where the need for controlling of precursor

chemicals (chemicals used to manufacture drugs) was discussed. To prevent drug abuse focussing on primary prevention, the drugs should be stopped at its source (United Nations Office on Drugs and Crime, 2014).

Drug abuse is an international and global problem that can only be successfully addressed with proper scientific testing, quantitative research, focused policy, intervention strategies and a balanced and integrated approach.

### **4.3 PROPOSED METHODOLOGY**

#### **4.3.1 Research design.**

The proposed study follows a mixed research design. Quantitative and qualitative data will be collected from suspected exhibits, handed in at the SAPS Forensic Science Laboratory during a three month period.

After analysis to determine the active ingredient, the mass, geographical information (origin of the exhibits) and visual characteristics will be documented.

#### **4.3.2 Data sources (Population Characteristics)/ collection techniques.**

The current SAPS protocol dictates that all suspected drugs (excluding Cannabis sativa-“Dagga”) should be handed in for analysis at the Forensic Science Laboratory. All the information of the exhibits is documented in a case file. This would include geographical, chemical and physical characteristics. After analysis all the needed information would be collected from the forensic case file and entered in an “Epi data” database or Strata II selection database. This would ensure that all potential drugs, confiscated by the various Police officials at all the stations throughout the Western Cape will be used in the study. Current trends indicates that 9000 to 10 000 confiscations (samples) would be used in the study.

#### **4.3.3 Issues of reliability and validity.**

To ensure reliability and validity of results, standard quality protocols, including peer quality review, would be conducted on all scientific analysis. Data would be captured

in the Epidata database by two independent individuals to ensure the quality of data and reliable conclusions.

Given the size of the population and the wide spread collection (throughout the province) valid statistical inferences can be drawn from the sample that would be applicable to the population as a whole.

#### **4.3.4 Sampling techniques (Inclusion and Exclusion Criteria).**

Sample for testing would follow on of two protocols:

Protocol A - For all homogenous populations of less than 10g a single sample would be tested.

Protocol B - For all homogenous populations of more than 10g the statistical Hypergeometric sampling method would be used to allow for statistical analysis of large populations (Scientific Working Group for the analysis of Seized Drugs, 2014).

#### **4.3.5 Data analysis and interpretation.**

Data analysis of all chemical tests would be conducted by trained and competent Forensic Scientists at the Chemistry section of the Forensic Science Laboratory in the Western Cape.

Epidata data capturing would be conducted by administrative personnel receiving training prior to capturing.

Parametric and non-parametric data will be analysed using one way analysis of variance (ANOVA) and the Kruskal-Wallis test respectively to determine if a significant difference exists between the different types of drugs in the various geographical areas. Data would also be analysed using a Spearman rank correlation to determine if any correlation exist between data.

#### 4.3.6 Ethical considerations / confidentiality.

During the study no names or any information that could link an individual to data would be captured. Only analysts and personnel with the necessary security clearance would have access to the forensic case files.

#### 4.3.7 Study Measurements.

Data collected during the study would include but is not limited to the following:

- Date received at the laboratory.
- Police stations where drugs were confiscated.
- Geographical area of confiscation.
- Type of drug.
- Amount of drugs.
- Charged with dealing or possession.
- Analytical Instrument used.
- Sample characteristics (colour, measurements, and photos.)

#### 4.4 WORK PLAN

STEPS IN THE RESEARCH PLAN	DEADLINE FOR COMPLETION
Submission of the proposal	2014-12-15
Design of a research plan	2015-01-30
Gaining access/getting permission to work in area/have access to data, etc.	2015-01-30
Defining of a sample time frame	2015-01-30
Literature review	2015-04-25
Design and testing of received drugs	2015-06-30

Design and testing of a computer program	2015-06-30
Quality Control of Analytical analysis	2015-07-30
Editing of completed forensic case files, grouping and coding of data, entering data into computer	2015-08-30
Raw tabulations/draft analysis of qualitative data	2015-09-30
Analysis of data	2015-10-30
Report of findings	2015-11-15
Presentation of final research products(s)	2015-11-30

#### 4.5 RISKS AND BENEFITS

The highest risks to the study would be the permission to conduct the work in the Forensic Environment and the possibility of non-completion of analytical work. The risks would be minimised by timeous application for the necessary permission and prioritisation of analysis to ensure no backlogs are created. This would be beneficial to both the study and the Criminal Justice System because a speedy trial for the accused would be a benefit. Proper motivation regarding potential benefits would also ensure the necessary permission is granted.

A benefit would be intelligence gathered to ensure the goals (see 1.3) are achieved. Following this pilot study further research projects could be designed so that communities would benefit from properly structured intervention programs to minimise the harm caused by drug abuse. Lastly policy makers could use the data to motivate changes if necessary.

#### **4.6 CONSENT PROCESS**

The consent needed to conduct and report the results, would be that of the SAPS.

The study proposal accompanied by a motivation would be forwarded to the Head Forensic Science Laboratory and the Divisional Commission Forensic Services to obtain the necessary authorisation.

Further to Police consent a formal ethics approval application will be made to the University of Cape Town, Faculty of Health Sciences, Human Research Ethics Committee.

#### 4.7 BIBLIOGRAPHY

Alliance for Health Policy and Systems Research, 2004. Strengthening Health Systems: The Role of Policy and Systems research. 1 ed. Geneva: World Health Organisation.

BEST DRUG INFI, 2010. heroin info. [Online]

Available at: [http://heroininfo.org/heroin\\_facts.html](http://heroininfo.org/heroin_facts.html)

Department Social Development Central Drug Authority, 2013. National Drug Masterplan 2013-2017. [Online]

Available at: <http://www.dsd.gov.za/cda/>

[Accessed 26 06 2013].

SA Government, 1965. ACT 101 OF 1965, medicines and related substances Act. [Online]

Available at:

[http://www.dsd.gov.za/cda/index2.php?option=com\\_docman&task=doc\\_view&gid=57&Itemid=39](http://www.dsd.gov.za/cda/index2.php?option=com_docman&task=doc_view&gid=57&Itemid=39)

[Accessed 17 01 2003].

SA Government, 1992. Drugs and Drug Trafficking Act, Act 140 of 1992. [Online]

Available at: <http://www.justice.gov.za/legislation/acts/1992-140.pdf>

[Accessed 30 09 2005].

SACENDO PROJECT, 2014. SA Health info Alcohol and Drug module. [Online]

Available at: <http://www.sahealthinfo.co.za/admodule/alcdrug.htm>

[Accessed 05 05 2014].

Scientific Working Group for the analysis of Seized Drugs, 2014. SWGDRUG Recommendations Edition 7.0. [Online]

Available at: <http://www.swgdrug.org/approved.htm>

[Accessed 14 08 2014].

United Nations Office on Drugs and Crime, 2014. 2014 World Drug Report. [Online]

Available at: [http://www.unodc.org/documents/data-and-analysis/WDR2014/World\\_Drug\\_Report\\_2014\\_web.pdf](http://www.unodc.org/documents/data-and-analysis/WDR2014/World_Drug_Report_2014_web.pdf)

Western Cape Provincial Government, 2011. National Drug Master Plan. [Online]

Available at: [http://www.capetown.gov.za/en/drugs/Documents/National\\_Drug\\_Master-Plan\\_2012-2016\\_June-20-2011.pdf](http://www.capetown.gov.za/en/drugs/Documents/National_Drug_Master-Plan_2012-2016_June-20-2011.pdf)

## **4.8 JUSTIFICATION OF CHANGES TO ORIGINAL PROTOCOL**

### **4.8.1 Limit study from all police precincts to only two.**

The original protocol was designed to look at data from all Police precincts in a 3 month period in the Northern and Western Cape. This endeavour, very soon after the start of the project, proved to be impossible to complete, in the timeframe.

It would also extend outside the scope of the academic requirements, calling for a “limited focus on one research question rather than many”

All the Drug data from all the Police stations in the Western Cape (16 clusters, 150 police stations and 25 satellite stations) were collected for a two year period (2013 and 2014). After the collection phase it was clear that a more focused approach should be followed.

After consultation with the supervisor it was decided to focus the study as a pilot, looking at all the data from 2013 and 2014 but only for two stations. This would allow for a better understanding of the data, given the extended period. The long period would also accommodate seasonal effects and other effects, like holidays and special Police drug operations, which might have had an effect on Police- and Drug activity.

### **4.8.2 Scope of study.**

The aim of the study is to evaluate policing methods and success measurements regarding drugs described in the Drugs and Drug Trafficking Act, Act 140 of 1992. The aim is not to provide an epidemiological evaluation but to focus on a police perspective.

### **4.8.3 Statistical Program used for data collection.**

Microsoft Excel was used and not Epidata as original planned. This was done to avoid a re-input of data into Epidata. Data was exported from databases directly into Microsoft Excel spreadsheets.

#### **4.8.4 Recommendations.**

Some needs or recommendations will be identified but not evidenced as this falls outside the scope of the minor dissertation. It will, however, be listed.

# **5.**

## **PART B**

### **STRUCTURED LITERATURE REVIEW**

## LITERATURE REVIEW

To understand drugs, drug abuse and drug prevalence in South Africa, it is critical to understand the current system of regulation in South Africa. Drugs are mainly regulated by two Acts of Parliament with two more Acts directing prevention and treatment. A closer look at the acts will lay the foundation and provide clarity throughout the study.

- Act 101 of 1965 – Medicines and Related Substances Act. (Medicines Act)

This act ensures that medicine and related substances destined to be used on/by humans and animals are registered and controlled. The main control is provided by the Medicine Control Council established in terms of the act. This act further provides guidance and regulations in the manufacturing, packaging, labelling, distribution and selling of not only medicine, but also medical devices.

From a closer look at the act and its sections it can be seen that after the definitions in section 1, sections 2 to 12 deals with the Control Council, its constitution, appointment, legal mandate, terms of office, obligations and responsibilities. Section 13 establishes the medicines register and section 14 deals with the prohibition of sale of unlicensed medication. Section 15 to 17 provides a process for registration and provides the minister with the power to prescribe conditions for the supply of more affordable medicines and processes for transfer and cancellation of registration. Section 18 to 21 regulates the labels and issues like bonusing, sampling, advertisement and marketing of medicines. Section 22 looks at the different schedules and provides the rules regarding who, what, when and to whom different scheduled drugs may be sold.

As an example it would be Section 22A(16) which determines that any person may possess a Schedule 0-2 medicine for medical purposes and a schedule 3-6 substance only if you are in possession of a legal prescription. Section 23 to 25 deals with disposal of undesirable medicines, the appeals process and the privileges of the council and committees.

Section 26 paves the way for the appointment of inspectors and section 28 provides them with powers. Section 29 defines offences and Section 30 provides the Criminal Justice System with associated penalties.

In Section 35 powers are again provided to the minister to make regulations in consultation with the council.

All medicines are therefore classified into schedules (0-9) and properly regulated (SA Government, ACT 101 OF 1965).

- Act 140 of 1992 – Drugs and Drug Trafficking Act. (Drug Act)

The first important aspect to note is that any provisions made in the Drug Act would apply in addition to anything prescribed in the Medicines Act: This act makes it a criminal offence to possess, use, distributes, sells, import, manufacture or deal in any substance listed in the act.

Section 11 provides a Police official with powers to enforce the law. Section 13-16 describes the offences and section 17 the associated penalties.

The Drug Act also provides direction in relation to presumptions, how to deal with persons who benefit from drug trafficking, their possessions, including property and confiscation orders.

Substances are listed in two Schedules:

Schedule 1: Substances useful for the manufacture of drugs.

In Part I of schedule 1 substances such as ephedrine, used in the manufacturing of methamphetamine (Tik, Speed) are listed.

In Part II of schedule 1 chemicals such as Anthranilic Acid, used in the manufacturing of methaqualone (Mandrax, Buttons) are listed.

Schedule 2:

Part I Dependence – Producing Substances like Chlorphentermine.

Part II: Dangerous Dependence – Producing substances like Dronabinol (Chemical in Cannabis) and cocaine.

Part III: Undesirable Dependence – Producing substances, like Amphetamine and lysergic acid diethylamide (Active ingredient in LSD) (SA Government, Act 140 of 1992).

It needs mentioning that South Africa's Medicines and Drug Acts are some of the best and most liberal pieces of legislation in the world. The salts, esters, ethers and isomers of all listed substances were always regarded as part of the acts and therefore also listed in the acts. It was always possible for criminals to make a small change in the chemical structure (create a homologues) of a listed substance and then, when confronted with law requirements, claim that the structure is not listed. The legislator was unable to keep ahead with the listings of new manufactured drugs in the acts.

In March 2012 a change in the Medicines Act allow the legislator to stay one step ahead of criminal activity. Schedule 5 to 7 was amended to include homologues. "All homologues of listed substances (being any chemically related substances that incorporate a structural fragment into their structures that is similar to the structure of a listed substance and/or exhibit pharmacodynamics properties similar to the listed substances in the schedules)" now also form part of the schedule.

This would mean a previous unlisted homologue of a listed scheduled 5-7 drug would automatically form part of the Medicines Act and schedules, without being specifically listed (Government Gazette No 32150, 2012).

In March 2014 the Drug Act was similarly amended. This immediately included all the synthetic cannabinoids and meth-cathinone analogues (so-called bath salts) in the legislation (Government Gazette no 37495, 2014).

- Act 20 of 1992 – Prevention and Treatment of Drug Dependency Act (Drug Dependency Act) and  
Act 70 of 2008 -Prevention and Treatment for Substance Abuse Act. (Substance Abuse Act)

Act 70 of 2008 set the table for a national response against substance abuse and provides the framework for demand- and harm reduction of substance abuse. This act and regulations further provide guidance with regards to minimum norms and standards for registration, management, monitoring and evaluation of in- and outpatient facilities, service providers, halfway houses, public and community based services.

Lastly the Substance Abuse Act provide for the establishment of the Central Drug Authority (CDA). Section 56 stipulates the powers and duties of the CDA. These include:

- Oversight and monitoring of the implementation of the National Drug Master Plan. (NDMP)
- Facilitate the coordination of strategic projects.
- Monitor effective use of existing resources.
- Ensure departments compile drug master plans in line with the goals of the NDMP and have performance indicators to measure success, and
- “ensure the establishment and maintenance of information systems which will support the implementation evaluation and ongoing development of the National Drug Master Plan” (SA Government, Act 70 of 2008).

Section 57 to 60 continue to allow each provincial MEC to establish a provincial substance abuse forum with local Drug Action Committees in municipalities (SA Government, Act 70 of 2008).

The main role players or custodians of these acts are the Department of Health, through the Medicine Control Council, the South African Police Service and the Department of Social Development.

The strategy for the fight against drug abuse is compiled by the Central Drug Authority (CDA), under the guidance of the Department of Social Development. The current strategy guiding document is the revised National Drug Master Plan 2013-2017 (NDMP). Working with the CDA is the Inter- Ministerial Committee on Alcohol and Substance Abuse, who has to work on government policy, law and strategies to reduce the supply and demand of illicit drugs (National Drug Masterplan 2013-2017, 2013).

The NDMP is not only for guidance on strategy but is also to guide and monitor the government/departments, in their demand and supply reduction efforts (National Drug Masterplan 2013-2017, 2013).

A closer look at the NDMP is needed to enable evaluation of the current performance indicators, when it comes to substance abuse in South Africa.

The current NDMP follow international trends by focussing on effectively reducing harm associated with the manufacturing, dealing and use of illicit substances: the so-called “whole-of-society” approach, with harm reduction as the main aim. This is in contrast with the previous plan where the focus was primarily on supply reduction, using mainly the Drug Act to police drug manufacturing, dealing and possession thereby criminalizing the mentioned actions (Howell, 2015) .

The new NDMP differs from the 2006-2011 NDMP in the following aspects as quoted within the NDMP 2013-2017 itself:

- “Devising solutions from the bottom up rather than from the top down;
- Shifting from a national to a community approach to devising strategy (from one size fits all to a community-specific solution);
- Shifting from supply reduction to primary prevention in an integrated strategy;
- Developing and applying an evidence-based monitoring and evaluation (M&E) approach to the formulation of the results to be achieved, i.e. impact, outcomes, outputs and targets;

- Aligning the NDMP and national and provincial department drug master plans with an M&E approach;
  - Applying research and development to meet the predicted needs and future changes in the field of substance abuse;
  - Reporting in terms of M&E needs instead of activities carried out; and
  - Steering the reporting base beyond the CDA and its supporting infrastructure by including non-CDA sources and linked databases”
- (National Drug Masterplan 2013-2017, 2013).

The Minister of Social Development, Minister Dlamini, wrote in the Foreword of the NDMP the following:

“The plan is intended to help realise the vision of a society free of substance abuse so that more attention can be focused on raising the quality of life of the poor and vulnerable and of developing the people to achieve their true potential. In comparison with the National Drug Master plan 2006-2011, the revised plan focuses more on the delivery of evidence based strategies that are designed to meet the defined needs of communities. It also strengthens prevention which is the most important leg of this program” (National Drug Masterplan 2013-2017, 2013).

The NDMP 2013-2017 states that it has five desired outcomes. These are listed as:

- “South Africans who have a knowledge, skills and attitudes needed to combat the substance abuse problems;
- South Africans who have a value system in terms of which they reject out of hand the use of dependence-forming substances;
- A strategic approach to substance abuse that involves prevention, treatment, aftercare and the re-integration with society as a means of enabling the population to deal with the problem;
- A strategic approach that involves the balanced integration of demand reduction, supply reduction and harm reduction; and

- A measured level of substance abuse in the country that is less than that of generally accepted international norms, and tends to decrease annually until the country is free of substance abuse” (National Drug Masterplan 2013-2017, 2013).

To see if the plan succeeds in realising this vision, a closer analysis of critical mentioned issues highlighted by the minister is needed.

The question of “evidence based” strategies poses a difficulty to departments. How will the South African Police Service (SAPS) provide quantitative proof of reduction efforts? Two other critical role players in the criminal Justice system namely the Prosecuting Authority and the Department of Correctional Services also faces this difficult question.

What evidence (statistics) can be produced to prove that drug smugglers are successfully prosecuted. Lastly the question to the Department of Correctional Services: “What proof can they provide that their efforts prevented a reoccurrence of the unaccepted behaviour, namely unauthorised illicit drug supply?

The Minister stated clearly that efforts must strengthen prevention.

**TABLE 1**  
**GENERAL SA DRUG CRIME STATISTICS**

<b>YEAR</b>	<b>SOUTH AFRICA</b>	<b>BELLVILLE</b>	<b>ATHLONE</b>
<b>2004</b>	62 689	122	279
<b>2005</b>	84 001	131	345
<b>2006</b>	95 690	188	412
<b>2007</b>	104 689	220	498
<b>2008</b>	109 134	268	455
<b>2009</b>	117 172	314	519
<b>2010</b>	134 840	353	736
<b>2011</b>	150 673	511	1019
<b>2012</b>	175 823	735	1136
<b>2013</b>	206 609	776	990
<b>2014</b>	258 472	725	1111

Looking at the published drug related crime (Table 1), South Africa have experienced an increase in drug related crime; from 62 689 cases in 2004 to 134 840 in 2010 to 258 472 in 2014. These represent an increase of more than 400% over the last 10 years. At a first glance at the statistics efforts of the last 10 years has done very little to strengthen prevention given the 400% increase in drug related crime. The statistics can however also be interpreted as a huge success given the fact that more criminals have been arrested, prosecuted and incarcerated.

The World Health Organization (WHO), in its book “Strengthening Health Systems: The Role and Promise of Policy and Systems Research” (Alliance for Health Policy and Systems Research, 2004) provides important findings including that:

- The lack of research can lead to undesirable results.
- Research can contribute most when issues are formulated through clear and empirical verifiable hypotheses.
- Only 5% of total publications on health systems worldwide focus on developing countries.
- Stakeholders support different priorities while critical problems are not targeted.

It is clear that the CDA has taken these findings to heart in the compilation of the NDMP. The objectives of the plan cannot be faulted.

- “Ensure coordination of efforts to reduce the demand, supply and harm caused by substances of abuse;
- Ensure effective and efficient services for the combating substance of abuse through the elimination of drug trafficking and related crimes;
- Strengthen mechanisms for implementing cost-effective interventions to empower vulnerable groups;
- Ensure the sharing of current good practices in reducing harm including social ills related – substance abuse;
- Provide a framework for the commissioning of relevant research;
- Provide a framework for Monitoring and Evaluation; and

- Promote national, regional and international cooperation to reduce the supply of drugs and other substances of abuse” (National Drug Masterplan 2013-2017, 2013).

These findings are particularly true and valid in the South African context. The current shortage or unavailability of drug statistics in the public domain highlights the lack of research in the illicit drug environment in South Africa. The only reliable open source of drug trends in South Africa is the South African Community Epidemiology Network on Drug Use (SACENDU). This network collects and publishes drug trend data. This project is coordinated by the Medical Research Council of South Africa. Data is collected from various role-players but mainly focus on rehabilitation and treatment centre data. This implies mainly self-reported data. Policy and intervention planning is therefor currently mainly done by relying on self-reported SACENDU and SA Police Service published arrest data (Table 1).

The NDMP acknowledge the fact that “accurate comprehensive and up-to-date data on the nature, extent and consequences”, of drug use in South Africa is needed to empower policy makers and legislators.

The NDMP list supply reduction outcomes as follows:

- “Improved control over distribution of and access to raw drugs and precursor materials;
- Improved control over production, manufacture, sale, distribution and trafficking of drugs, precursor materials and manufacturing facilities;
- Increase seizure and destruction of precursor materials, raw materials and products, refined drugs, production, manufacturing and distribution facilities, and resources;
- Reduced drug-related crime, especially with respect to the use (e.g. driving under in influence; use in prohibited areas such as prisons, school etc.), abuse, and production, manufacture and distribution (dealers, factories, etc.); and
- Increased successful prosecutions for offences relating to use, abuse, etc. in contravention of existing legislation” (National Drug Masterplan 2013-2017, 2013).

Drug precursors are as one of the strategies mentioned to focus on in supply reduction efforts. Drug precursors are chemicals that can be used in the manufacturing of drugs. These chemicals are regulated by Section 6 of the International Trade and Administration Act, Act 71 of 2002. Section 6 provides the Minister with powers to regulate import and exportation of these chemicals.

Another important piece of legislation to be used in pre-cursor control would be section 3 of the Drugs and Drug Trafficking Act, Act 140 of 1992. Section 3 stipulates that “no person shall manufacture any scheduled substance or supply it to any other person, knowing or suspecting that any such scheduled substance is to be used in or for the unlawful manufacture of any drug”. Most of the precursors are listed in Schedule 1 of the Drug Act.

It further places emphasis on the demand for measurable achievements and in the same plan admits and highlights the fact that there is very little to no scientific research available to “guide the improvement of supply control and law enforcement efforts.” This contradiction confirms the statement that “the plan is however riddled with internal inconsistencies and impractical resolutions. As a result it will be extremely difficult to implement” (Howell, 2015).

Resolution 15 of the 2<sup>nd</sup> Biennial Anti-Substance Abuse Summit requires a 10% increase in successful prosecutions and a 10% drop in transgressions by ensuring that the criminal justice system becomes an effective deterrent for offenders through harsher punishment and asset seizure (National Drug Masterplan 2013-2017, 2013).

The inevitable demand for a measurable achievement is again problematic given the lack of a proper definition for “successful prosecutions” (Currently defined as guilty, not guilty or struck of the court roll). The 10% drop in transgressions will surely not be archived given the 400% increase in drug related crime (Table 1) (Crime Stats SA, 2014).

The 2015 World Drug Report from the United Nations offices on Drugs and Crime (UNODC) stated in its executive summary: “According to the most recent data available, there has been little change in the overall global situation regarding the production, use and health consequences of illicit drugs” (World Drug Report, 2015).

Looking at drug related crime statistics, focussing on drug arrests, seems to be in contradiction with the increase experienced in South Africa. The UNODC estimates that internationally 1 in 20 people between the ages of 15 and 64 used illicit drugs in 2013 (World Drug Report, 2015).

Internationally heroin use has been stable. Closer to home the limited information indicates that heroin use has increased in Africa due to the increasing importance of the route through Africa for Afghan heroin. It is estimated that 0,4% of the global seizures of heroin occurred in Africa. A drastic decrease in heroin seized was reported from 2012 to 2013 (World Drug Report, 2015).

Internationally cocaine use has decreased. It is estimated that 0,7% of the African and 0,4% of the Southern African population use cocaine. There are also indications that Africa is more and more a transit hub for cocaine destined for Europe.

There are indications that cannabis use, is on the increase internationally. 9,3% of the global seizures were in Africa and it is estimated that 5% of the population uses cannabis in Southern Africa. This in comparison to 7, 5% in Africa or 3, 9% globally (World Drug Report, 2015).

Amphetamine Type Stimulants (ATS) shows an increase, with methamphetamine the main contributor. In 2009 34 tons were seized, increasing to 88 tons in 2013. It is estimated that 0,7% of the Southern African population use ATS (World Drug Report, 2015).

The lack of statistics from Africa, including South Africa is clear when perusing the 2015 World Drug Report.

The latest SACENDU Statistics reported by 32 treatment centres for the Western Cape, shows methamphetamine as the most common primary substance of abuse. Of admitted patients, 33% reported methamphetamine as their primary substance of abuse (Sacendu Project, 2014). This correlates with the 2015 World Drug Report indicating an increase in ATS with methamphetamine the major contributor.

It is clear from the literature review that very little information and research is available in the public domain. The following suggestions/observations can be considered:

- The implementation and monitoring of NDMP can improve to provide a better overall understanding of drug use and abuse in South Africa.
- Government Departments are all doing their bit to fight the battle against drugs and drug abuse but interdepartmental communication must be improved.
- Structures for the sharing of information between government departments should be established.
- Existing data should be combined to provide an overall view of the current situation.
- Private and parastatal organisations like the SACENDU Project must be utilised more effectively.
- The lack of proper research is evident and should be addressed.
- A database to see the overall view of the drug situation should be established.
- Funding for research must be made available to established institutions and universities.
- Supply reduction strategies must be reviewed to attack the drug value chain at the dealer/manufacturer's level, and focus more on pre-cursor monitoring.
- Goals and the measurement of success in government departments must be assessed.
- Specialised investigators and training in pre-cursor monitoring is needed; and
- A stronger focus on the abuse of over the counter/prescription drugs is needed.

## BIBLIOGRAPHY

Alliance for Health Policy and Systems Research, 2004. Strengthening Health Systems: The Role of Policy and Systems research. 1 ed. Geneva: World Health Organisation.

Crime Stats SA, 2014. CRIMESTATSSA. [Online]

Available at: <http://www.crimestatssa.com/>

Government Gazette No 32150, 2012. Medicine and Related Substances Amendment Act. Government Gazette, 12 March, p. NO 32150 R.227.

Government Gazette no 37495, 2014. Drug and Drug Trafficking Amendment Act. Government Gazette, 28 March, p. No. R. 222.

S Howell , 2015. The South African National Drug Master Plan 2013-2017. A critical Review. South African Journal of Criminal Justice, 28(1), pp. 1-23.

National Drug Masterplan 2013-2017, 2013. Department Social Development Central Drug Authority. [Online]

Available at: <http://www.dsd.gov.za/cda/>

[Accessed 26 06 2013].

SA Government, 1965. ACT 101 OF 1965, medicines and related substances Act. [Online]

Available at:

[http://www.dsd.gov.za/cda/index2.php?option=com\\_docman&task=doc\\_view&gid=57&Itemid=39](http://www.dsd.gov.za/cda/index2.php?option=com_docman&task=doc_view&gid=57&Itemid=39)

[Accessed 17 01 2003].

SA Government, 1992. Drugs and Drug Trafficking Act, Act 140 of 1992. [Online]

Available at: <http://www.justice.gov.za/legislation/acts/1992-140.pdf>

[Accessed 30 09 2005].

SA Government, Act 70 of 2008. Prevention and Treatment for Substance Abuse. GOVERNMENT GAZETTE, 21 April, p. Vol526 No32150.

Sacendu Project, 2014. SA Health info Alcohol and Drug module. [Online]

Available at: <http://www.sahealthinfo.co.za/admodule/alcdrug.htm>

[Accessed 05 05 2014].

Scientific Working Group for the analysis of Seized Drugs, 2014. SWGDRUG Recommendations Edition 7.0. [Online]

Available at: <http://www.swgdrug.org/approved.htm>

[Accessed 14 08 2014].

United Nations Office on Drugs and Crime, 2014. 2014 World Drug Report. [Online]

Available at: [http://www.unodc.org/documents/data-and-analysis/WDR2014/World\\_Drug\\_Report\\_2014\\_web.pdf](http://www.unodc.org/documents/data-and-analysis/WDR2014/World_Drug_Report_2014_web.pdf)

Western Cape Provincial Government, 2011. National Drug Master Plan. [Online]

Available at: [http://www.capetown.gov.za/en/drugs/Documents/National\\_Drug\\_Master-Plan\\_2012-2016\\_June-20-2011.pdf](http://www.capetown.gov.za/en/drugs/Documents/National_Drug_Master-Plan_2012-2016_June-20-2011.pdf)

World Drug Report 2015, 2015. United Nations Office on Drugs and Crime. [Online]

Available at: <http://www.unodc.org/wdr2015/en/previous-reports.html>

[Accessed 26 June 2015].

# **6.**

## **PART C**

### **PUBLICATION-READY MANUSCRIPT**

## ***A pilot study Investigating the chemical composition and prevalence of drug types in the Western Cape.***

***Col. HJJ Westraat***

*(Chemistry Commander, SA Police Service, Forensic Science Laboratory Western Cape)*

***Dr. M Heyns***

*(Division of Forensic Medicine and Toxicology, Faculty of Health Sciences, University of Cape Town)*

### **ABSTRACT**

*Very little chemical information is known about substances being abused in South-Africa. This can be attributed to the fact that possession of drugs constitutes a criminal offence. Not much research is done, and with the exception of self-reported, rehabilitation institution data, from the South African Community Epidemiology Network on Drug Use (SACENDU) and the South African Police Service's drug related arrest data, no other data on drugs and drug use\_ is publically available. Drugs are being manufactured from legal and illegal chemicals in clandestine laboratories, not complying with any health, safety or quality standards causing a serious health risk in communities. The strategy for the fight against drug abuse in South Africa, the National Drug Master Plan 2013-2017 (NDMP), is compiled by the Central Drug Authority (CDA). Without proper research or data to base decisions and strategies on and proper measuring of achievements, the implementation of the plan suffers. The Forensic Science Laboratory (FSL) of the South African Police Service (SAPS), is responsible for the chemical testing of substances, suspected of being illegal drugs, for identification purposes. This supports the prosecuting of suspects during criminal procedures. With the active ingredient known, the use of street names e.g. Tik, Choef or Speed (all referring to methamphetamine) can be abandoned and confusion and misconceptions eliminated. This pilot study investigates the arrest data, in combination with the charge laid against the arrestee and the chemically identified active ingredient in each case. Arrest data revealed a 400% increase in drug related arrests over the last 10 years, while the NDMP requires a 10% decrease. It further highlights the fact that the measurement of success (number of arrests) in the SAPS, resulted in a focus on arresting persons in possession of drugs. The dealers and manufacturers were not adequately addressed and prevention, through chemical monitoring,*

*suffered as a result. This study also clearly revealed that international trends are not a definite indication of the extent and type of drug abuse in South African Communities. The study further attempts to contribute, and to better describe the situation of drugs and drug abuse in communities. This in turn, will provide data to develop evidence based strategies, designed to meet the defined needs of communities, one of the aspects highlighted by the minister in the NDMP, namely an intervention based on reality and local statistics. It is therefore clear that a scientific understanding of the composition of abused substances can direct treatment, policy, prevention measures and provide intelligence to combat drug abuse and illegal drug manufacturing in South Africa.*

## INTRODUCTION

Working in the Criminal Justice System is unique.

“Institutions of criminal Justice consist of a set of organizational arrangements that bring people together to constrict harms in terms of offenders and victims and then go through a process of allocating both blame and punishment to offenders”<sup>1</sup>.

The aim is to find criminals (people not conforming to the norms and standards as described in current legislation), prove beyond reasonable doubt guilt of this non-conformance, and then, put in place measures to prevent a recurrence of the non-conforming behaviour. Measures are usually punitive in nature and could include community service, referrals, fines or incarceration. The inevitable question would be, are we successful in our efforts? Even more so when discussing illicit drugs.

Although a drug can be described as anything that has an effect on the central nervous system, for the purpose of this study the emphasis will be on the drugs listed in the Drug and Drug Trafficking Act, Act 140 of 1992.

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<sup>1</sup> Berg J, Shearing C, 'The Practice of Crime Prevention. Design and principles for more effective security governance.', *SA Crime Quarterly*, 36,1,(June 2011), pp. 23-30.

Drugs are regulated in South Africa with two Acts of Parliament: Medicines and Related Substances Act, Act 101 of 1965 (Medicines Act) and the Drugs and Drug Trafficking Act, Act 140 of 1992 (Drug Act).

The first important aspect to note is that any provisions made in the Drugs and Drug Trafficking Act would apply in addition to anything prescribed in the Medicines and related substances Act. This act makes it a criminal offence to possess, use, distribute, sell, import, manufactured or deal in any substance listed in the act<sup>2</sup>. The salts, esters, ethers and isomers of all listed substances are a part of the act<sup>3</sup>. In March 2012 the Medicines act, schedules 5 to 7 were amended to include homologues<sup>4</sup> and in March 2014 the Drug Act was similarly amended<sup>5</sup>. These amendments allowed for the inclusion of all the synthetic cannabinoids and meth-cathinone analogues (so-called bath salts) in the legislation<sup>6</sup>. Another Act of importance is Act 70 of 2008. This Act and regulations provide guidance with regards to minimum norms and standards for registration, management, monitoring and evaluation of in- and outpatient facilities, service providers, halfway houses, public and community based services and lastly provide for the establishment of the Central Drug Authority (CDA)<sup>7</sup>. The strategy for the fight against drug abuse, the National Drug Master Plan 2013-2017 (NDMP), was compiled by the CDA, under the guidance of the Department of Social Development. The NDMP has as an outcome the: "Ability of all people in South Africa to deal with problems related to substance abuse within communities"<sup>8</sup>. The NDMP is not only intended for guidance on strategy but is also developed to monitor the government/departments, in their demand and supply reduction efforts.

A closer look at the NDMP is needed to enable evaluation of the current performance indicators, when it comes to substance abuse in South Africa. The current NDMP follow

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<sup>2</sup> SA Government, *Drugs and Drug Trafficking Act, Act 140 of 1992*. Online Available at: <http://www.justice.gov.za/legislation/acts/1992-140.pdf> retrieved on 17 April 2015

<sup>3</sup> SA Government, 'Medicines and related substances Act, Act 101 of 1965.', Online available at [http://www.hpcs.co.za/Uploads/editor/UserFiles/downloads/legislations/acts/medicines\\_and\\_related\\_sub\\_act\\_101\\_of\\_1965.pdf](http://www.hpcs.co.za/Uploads/editor/UserFiles/downloads/legislations/acts/medicines_and_related_sub_act_101_of_1965.pdf), retrieved on 17 April 2015

<sup>4</sup> SA Government, 'Medicines and Related Substances Amendment Act.', *Government Gazette* No 32150, R.277, (12 MARCH 2012)

<sup>5</sup> SA Government, 'Drug and Drug Trafficking Amendment Act.', *Government Gazette* No 37495, R.222, (28 MARCH 2014)

<sup>6</sup> These legislation changes makes South African legislation some of the best and most liberal.

<sup>7</sup> SA Government, 'Prevention and Treatment for Substance Abuse Act, Act 70 of 2008.', *Government Gazette* No 32150, (21 April 2008)

<sup>8</sup> Department Social Development: Central Drug Authority, 'National Drug Masterplan 2013-2017'. Online Available at: <http://www.dsd.gov.za/cda/index.php>, retrieved on 28 October 2014

international trends by focussing on effectively reducing harm associated with the manufacturing, dealing and use of illicit substances.

The “whole-of-society” approach with harm reduction as the main aim is advocated. This is in contrast with the previous plan where the focus was primarily on supply reduction, using mainly the Drug and Drug trafficking Act, Act 140 of 1992, to police drug manufacturing, dealing and possession, thereby criminalizing the mentioned actions<sup>9</sup>.

The Minister of Social Development, Minister Dlamini, wrote in the Foreword of the 2013-2017 NDMP the following:

“The plan is intended to help realise the vision of a society free of substance abuse so that more attention can be focused on raising the quality of life of the poor and vulnerable and of developing the people to achieve their true potential. In comparison with the National Drug Master plan 2006-2011, the revised plan focuses more on the delivery of evidence based strategies that are designed to meet the defined needs of communities. It also strengthens prevention which is the most important leg of this program”<sup>10</sup>.

Critical issues mentioned by the minister include “evidence based” strategies to prove reduction efforts. This proved to be difficult, for the Criminal Justice System.

The minister stated clearly that efforts must strengthen the prevention and harm reduction of drugs of abuse. Looking at the published drug related crime data (Table 1), South Africa has experienced an increase, from 62 689 cases in 2004 to 134 840 in 2010 and again an increase to 258 472 in 2014. These represent an increase of more than 400% over the last 10 years. At a first glance at the statistics, efforts of the last 10 years has done very little to strengthen prevention, given the increase in drug related crime. Studies are suggesting that widespread incarceration, on the assumption that it will be a deterrent for potential users and drug dealers, are not successful, given the small and only temporary impact on drug related crime<sup>11</sup>

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<sup>9</sup> S Howell, Couzyn K, 'The South African National Drug Master Plan 2013-2017. A Critical Review'. *South African Journal of Criminal Justice*, 28,1 (2015), pp. 1-23

<sup>10</sup> Department Social Development: Central Drug Authority, 'National Drug Masterplan 2013-2017'. Online Available at: <http://www.dsd.gov.za/cda/index.php>, retrieved on 28 October 2014

<sup>11</sup> D Bewley-Taylor, C Hallam, R Allen, 'The Incarceration of Drug Offences: An Overview', International Centre for Prison Studies, Kings College LONDON, Report 16,(March 2009), pp1-18

**TABLE 1 GENERAL SA DRUG CRIME STATISTICS<sup>12</sup>**

<b>YEAR</b>	<b>SOUTH AFRICA</b>	<b>BELLVILLE</b>	<b>ATHLONE</b>
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The World Health Organization (WHO), in its book “Strengthening Health Systems: The Role and Promise of Policy and Systems Research” provides important findings including that:

- The lack of research can lead to undesirable results;
- Research can contribute most when issues are formulated through clear and empirical verifiable hypotheses;
- Only 5% of total publications on health systems worldwide focus on developing countries; and
- Stakeholders support different priorities while critical problems are not targeted<sup>13</sup>.

These findings are particularly true and valid in the South African context given the current shortage and unavailability of drug statistics in the public domain.

The NDMP acknowledges the fact that “accurate comprehensive and up-to-date data on the nature, extent and consequences”, of drug use in South Africa is needed, to guide strategy and policy<sup>14</sup>.

<sup>12</sup> Crime Stats SA, ‘CRIMESTATSSA.’, Online available at: <http://www.crimestatssa.com/> retrieved on 28 October 2014

<sup>13</sup> World Health Organisation, ‘Alliance for Health Policy and Systems Research. Strengthening Health Systems, The Role of Policy and Systems research.’, Online Available at: [http://www.who.int/alliance-hpsr/resources/Strengthening\\_complet.pdf](http://www.who.int/alliance-hpsr/resources/Strengthening_complet.pdf) retrieved on 28 October 2014

Very little chemical information is known about substances being abused in South-Africa. This can be attributed to the fact that possession of drugs constitutes a criminal offence. Drugs are being manufactured from legal and illegal chemicals in clandestine laboratories, not complying with any health, safety or quality standards. A scientific understanding of the composition of abused substances can direct treatment, policy, prevention measures and provide intelligence to combat drug abuse and illegal drug manufacturing in South Africa. No programs like the “Drug Forecasting Program” (DUF), administered by the United States (US) National Institute of Justice, the research arm of the US Justice Department or the “Drug Abuse Warning System” (DAWN) based at city level in the US, are available in South Africa<sup>15</sup>. The only reliable open source of drug trends in South Africa is the South African Community Epidemiology Network on Drug Use (SACENDU). This project is coordinated by the Medical Research Council of South Africa.

“The SACENDU Project is an alcohol and other drug (AOD) sentinels surveillance system operational in 9 provinces in South Africa. The system, operational since 1996, monitors trends in AOD use and associated consequences on a six-monthly basis from specialist AOD treatment programmes.” Mostly self-reported data is collected from 64 centres/programmes<sup>16</sup>.

The only other available source of information is the South African Police crime statistics on drug related offences (number of criminal cases opened, to be investigated) (Table 1). Policy and intervention planning is therefore currently mainly done by relying on self-reported and arrest data and not scientifically tested data.

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<sup>14</sup> Department Social Development: Central Drug Authority, ‘National Drug Masterplan 2013-2017’. Online Available at: <http://www.dsd.gov.za/cda/index.php>, retrieved on 28 October 2014

<sup>15</sup> Rosenveld R, Decher SH, ‘Are arrest statistics a valid measure of illicit drug use? The relationship between criminal justice and Public health indicators of cocaine, heroin and marijuana use’, *Justice Quarterly*, 16,3, (18 August 2006), pp. 685-699

<sup>16</sup> Medical Research Council, ‘Sacendu Project, SA Health info Alcohol and Drug module.’, Online Available at: <http://www.sahealthinfo.co.za/admodule/alcdrug.htm>, retrieved on 17 April 2015

Other studies have found similar problems when trying to describe the drug situation in Africa. It concluded that although about a fifth of the world's population and more than a quarter of the world's countries are in Africa, the continent is by far the least documented region in terms of drug related crime information.<sup>17</sup>

Common misconceptions are created in the media because of the use of "street names". Scientific and/or legal descriptions of drugs are rarely used. Recently the "WOONGA" drug was described as new and dangerous. This was in most cases nothing other than "di-acetyl morphine" or heroin, listed in the Drug and Drug Trafficking Act. Although heroin is dangerous, it is definitely not new.

The Forensic Science Laboratory of the South African Police Service (SAPS), in Cape Town, is partly responsible for the chemical testing of substances, suspected of being illegal drugs, for identification purposes in South Africa. This supports the prosecuting of suspects during criminal procedures. The chemical compositions of drugs are being identified using Gas-chromatography Mass Spectrometry (GC-MS), Fourier Transform Infrared Spectroscopy (FT-IR) and Ultra High Pressure Liquid Chromatography (UPLC).<sup>18</sup> With the active ingredient known, the use of street names e.g. Tik, choef or Speed (all referring to methamphetamine) can be abandoned.

The NDMP calls for the "Development and implementation of multi-disciplinary and multi modal protocols and practices for integrated diagnosis, and treatment".<sup>19</sup> With scientific testing being conducted for the criminal justice system, a valid question should be:

Why is the data generated by the South African Police Forensic Science Laboratory, for criminal prosecution, not made available to other government departments to guide policy and intervention strategies and broaden the general knowledge on substance abuse?

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<sup>17</sup> D Bewley-Taylor, C Hallam, R Allen, 'The Incarceration of Drug Offences: An Overview', International Centre for Prison Studies, Kings College LONDON, Report 16, (March 2009), pp1-18

<sup>18</sup> Scientific Working Group for the analysis of Seized Drugs, 'SWGDRUG Recommendations Edition 7.0', Online Available at: <http://www.swgdrug.org/approved.htm>, retrieved on 19 April 2015

<sup>19</sup> Department Social Development: Central Drug Authority, 'National Drug Masterplan 2013-2017'. Online Available at: <http://www.dsd.gov.za/cda/index.php>, retrieved on 28 October 2014

The data generated can then be used for the implementation of specialised community based interventions. This could promote one of the NDMP's goals namely:

“The creation of community specific health interventions to reduce the bio-psyco-social and economic impact of substance abuse and related illnesses in communities”<sup>20</sup>.

Closer to home the Western Cape Government in their Drug Master Plan 2012 to 2016 recognised the fact that a balanced approach is needed to deal with the problem of substance abuse. The focus is on demand- supply- and harm reduction<sup>21</sup>. The main focus, as advocated by the World Health Organisation (WHO) and the United Nations Office on Drugs and Crime (UNODC) is on “primary prevention”, a strategy based on preventing drug dependency. The UNODC recognised the role of research and the need for scientific chemical testing of drugs in its 2014 World Drug Report, where the need for controlling of precursor chemicals (chemicals used to manufacture drugs) was discussed. Drug abuse should be prevented by focussing on measures to stop it at its source.<sup>22</sup> Drug pre-cursor monitoring is, as one of the strategies mentioned, a focus on supply reduction efforts.

These chemicals are regulated by Section 6 of the International Trade and Administration Act, Act 71 of 2002 and section 3 of the Drugs and Drug Trafficking Act, Act 140 of 1992. Most of the pre-cursors are listed in Schedule 1 of the Drug Act.

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<sup>20</sup> Department Social Development: Central Drug Authority, '*National Drug Masterplan 2013-2017*'. Online Available at: <http://www.dsd.gov.za/cda/index.php>, retrieved on 28 October 2014

<sup>21</sup> Western Cape Provincial Government, '*National Drug Master Plan*'. ,Online Available at: [http://www.capetown.gov.za/en/drugs/Documents/National\\_Drug\\_Master-Plan\\_2012-2016\\_June-20-2011.pdf](http://www.capetown.gov.za/en/drugs/Documents/National_Drug_Master-Plan_2012-2016_June-20-2011.pdf) ,retrieved on 28 October 2014

<sup>22</sup> United Nations Office on Drugs and Crime, '*2014 World Drug Report*'. ,Online Available at: [http://www.unodc.org/documents/data-and-nalysis/WDR2014/World\\_Drug\\_Report\\_2014\\_web.pdf](http://www.unodc.org/documents/data-and-nalysis/WDR2014/World_Drug_Report_2014_web.pdf) retrieved on 28 October 2014

## METHODS AND RESULTS

According to the UNODC and the WHO, drug abuse is an international and global problem that can only be successfully addressed with proper scientific testing, quantitative research, focused policy, intervention strategies and a balanced and integrated approach. To verify success in the fight against drugs and drug abuse, drug related arrests during 2013 and 2014, at the Bellville and Athlone Police districts, were analysed. Rosenveld concluded that arrest data should provide a fairly accurate approximation of the drug problem, when compared to Cocaine and Heroin data from the Drug Use Forecasting Program (DUF) and Drug Abuse Warning System (DAWN) data. Marijuana arrest data is however, not accurate to forecast Cannabis consumption<sup>23</sup>. Details of all Drug related crime were extracted for the mentioned stations, from the SA Police Service, Crime system (CAS), the Forensic Science Laboratory Administration System (FSL ADMIN), and Forensic Case files. The arrest data were analysed to determine the type of case opened<sup>24</sup> and compared with data from the SAPS Forensic Science Laboratory, after chemical analysis.

**TABEL 2 DRUGS REACHING THE FORENSIC SCIENCE LABORATORY**

Drugs reaching the laboratory				
	Bellville		Athlone	
	Number of cases	%	Number of cases	%
2013	480 out of 778	62	715 out of 1148	62
2014	460 out of 720	64	680 out of 1184	57

<sup>23</sup> Rosenveld R, Decher SH, 'Are arrest statistics a valid measure of illicit drug use? The relationship between criminal justice and Public health indicators of cocaine, heroin and marijuana use', *Justice Quarterly*,16,3, (18 August 2006),pp. 685-699

<sup>24</sup> Possession cases are opened when a person is found in possession of a small amount of drugs, usually for personal use. In comparison a dealing case is opened where a larger amount of drugs is confiscated from a dealer or manufacturer. The latter a far more serious offence with a minimum of 10 years imprisonment. (Drug Act, Article 17c)

The first aspect that is abundantly clear is the fact that not all the drugs confiscated at the stations reached the Forensic Laboratory. This can be attributed to the current policy of the laboratory that all drugs, with the exception of small cannabis seizures, must reach the laboratory. The investigating officers will testify in courts after visual identification. These small cannabis seizures will then be destroyed at station level. It is clear that a substantial amount of drug arrests are small cannabis related cases.

**TABLE 3 % DEALING CASES**

% Dealing Cases		
	Bellville	Athlone
2013	1,6	4,7
2014	4,9	4,6

The second important aspect to note is the small percentage of cases where individuals are charged with drug dealing (Table 3). The expectation would be to focus reduction efforts at the supply and manufacturing level of the drug supply chain and not at the user level.

In the United States of America (USA) arrests for sale and manufacturing were 17, 8 % in 2012 and 17, 7% in 2013. This is significantly higher than the 1, 6% for Athlone and the 4, 7% for Bellville in 2013<sup>25</sup>.

The need and expectation of the government and the community, for crime prevention on the one hand and an evidence based measuring system, for example drug crime reduction, on the other, creates a problem, if the amount of arrests are the success indicator. A very successful prevention program will prevent arrests and drug related crime, while the decreasing arrest numbers could be interpreted as a lack of service delivery and a non-achievement of goals. The focus is clearly on proving success, currently measured by the amount of drug related arrests made. Other studies have come to the same conclusion.

<sup>25</sup> United States Government, 'United States Federal Bureau of Investigation Crime Stats'. Online Available at: <https://www.fbi.gov/stats-services/crimestats>. Retrieved on 25 August 2015

“The South African Police Service is charging with reducing crime levels in addition to providing effective law enforcement – big arrests and seizures are a negative indicator of the former and a positive indicator of the latter”<sup>26</sup>.

It is interesting to note that with a 3,3% increase in dealing cases at Bellville from 2013 to 2014 a decrease in the total number of arrests (58 less arrests) for the same period were recorded. The increased focus on dealers might not have been the only reason for the decrease in drug arrests, but is a definite contributing factor.

Depending on how the statistics are interpreted this outcome could have one of two potential outcomes:

**Very Good:** By focusing on the dealers, the availability of drugs has decreased with the associated decrease in drug arrests. Arrests have been prevented.

**Very Bad:** Targets and goals for drug arrests have not been reached; resulting in a poor performance rating.

The second important observation is the fact that Athlone reported an increase in drug cases from 2013 to 2014 but with a significant decrease in cases that were forwarded to the laboratory for analysis. This can only mean that the increase should, to a large extent, be attributed to more small cannabis violations. In turn this must partly be attributed to the demand for a measurable achievement in the NDMP and the SAPS performance measuring instrument.

An internal indicator used to measure success in the SAPS, is the detection rate<sup>27</sup>. It is clear that an increase in less serious cases that can be closed as unfounded or undetected, withdrawn or investigated without spending a lot of time and referred to court will increase the detection rate. Also clear is the fact that a high detection rate can be interpreted as a success for policing activities but not necessarily making an impact on the daily lives and experiences of communities.

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<sup>26</sup> T Leggett, ‘What do the Police do? Performance measurement and the SAPS’, Institute for Security Studies, paper 66,(February 2003),pp1-13

<sup>27</sup> The detection rate is the sum of the cases referred to court (fully investigated and ready for prosecution) + unfounded case (cases without a basis) + the withdrawn cases (not possible to prosecute due to a lack of evidence or cooperation of complainants) divided by the total cases registered / investigated.

The same NDMP that require measurable supply reduction, admits and highlights the fact that very little to no scientific research is available to “guide the improvement of supply control and law enforcement efforts”<sup>28</sup>.

This contradiction confirms the statement that “the plan is however riddled with internal inconsistencies and impractical resolutions. As a result it will be extremely difficult to implement”<sup>29</sup>. Resolution 15 of the 2<sup>nd</sup> Biennial Anti-Substance Abuse Summit requires a 10% increase in successful prosecutions and a 10% drop in transgressions, by ensuring that the criminal justice system becomes an effective deterrent for offenders, through harsher punishment and asset seizure<sup>30</sup>. The inevitable demand for a measurable achievement is again problematic given the lack of a proper definition for “successful prosecutions” (currently defined as guilty, not guilty or struck of the court roll, with the latter currently the major contributor to justice success statistics). The 10% drop in transgressions will surely not be achieved given the 400% increase in drug related crime (Table 1)<sup>31</sup>.

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<sup>28</sup> Department Social Development: Central Drug Authority, ‘National Drug Masterplan 2013-2017’. Online Available at: <http://www.dsd.gov.za/cda/index.php>, retrieved on 28 October 2014

<sup>29</sup> S Howell, Couzyn K, ‘The South African National Drug Master Plan 2013-2017. A Critical Review’. *South African Journal of Criminal Justice*, 28,1 (2015), pp. 1-23

<sup>30</sup> Department Social Development: Central Drug Authority, ‘National Drug Masterplan 2013-2017’. Online Available at: <http://www.dsd.gov.za/cda/index.php>, retrieved on 28 October 2014

<sup>31</sup> Crime Stats SA, ‘CRIMESTATSSA.’, Online available at: <http://www.crimestatssa.com/>, retrieved on 28 October 2014

**TABLE 4 % PER TYPE OF DRUG**

% PER TYPE OF DRUG								
	BELLVILLE				ATHLONE			
	2013		2014		2013		2014	
	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%
<b>CANNABIS</b>	4 (298)	38.8	(260)	36.1	2(433)	37.9	1(504)	42.7
<b>CATHINONE</b>	90	11.6	54	7.5			1	0.1
<b>HEROIN</b>	66	8.5	61	8.4	90	7.8	94	7.9
<b>METHAMPHETAMIN</b>	169	21.7	189	26.3	281	24.1	263	22.2
<b>METHAQUOLONE</b>	78	10.0	98	13.6	230	20.0	143	12.1
<b>PSYLOCIN</b>	2	0.3						
<b>COCAIN</b>	5	0.6	4	0.6	5	0.4	2	0.2
<b>ATS</b>	3	0.4	1	0.1	1	0.1		
<b>NO DRUGS (NEG)</b>	10	1.3	8	1.1	23	2.0	11	0.9
<b>NO ANALYSIS</b>	51	6.5	45	6.3	83	7.2	165	13.9
<b>MEDICINE</b>	2	0.3						
<b>TOTAL (Received at Lab)</b>	480		460		715		680	
<b>TOTAL (Received at Station)</b>	778		720		1148		1184	

\* The % calculation is based on the total amount of cases received at the Stations.<sup>32</sup>

\*\* The number in ( ) is the assumed small Cannabis cases

During the categorization and calculation of cases received at the stations some of the drugs were combined to minimise the categories<sup>33</sup>. Cases categorised as “NO ANALYSIS” were cases that was finalised without the need for a chemical analysis<sup>34</sup>. These cases must, however be sent to the Forensic Laboratory to ensure destruction, according to Health and Safety procedures.

<sup>32</sup> The assumption is made that the cases not received at the lab constitutes small Cannabis cases.

<sup>33</sup> If a case had more than one type of Drug (More than one exhibit per case) the case were categorised according to the highest value, mass or schedule. The different categories includes the following:

- The Cathinone group contains all the Meth-Cathinone, Catha Edulis plant material, Cathine and Cathinone cases.
- The ATS group (Amphetamine type stimulants) includes MDA, MDMA, AMPHETAMINE etc
- The Psilocin group also contains psilocybin cases

<sup>34</sup> Analysis would not be needed if evidence were found abandoned or no accused could be linked to the drugs. If the Prosecuting Authority declined to prosecute because of a lack of evidence or deficiency (Search Warrant problems etc.) in the case, cases would also be finalised at the Stations without the need for a Forensic Chemical Report and therefore no analysis would be conducted.

## DISCUSSION

The 2015 World Drug Report from the United Nations offices on Drugs and Crime (UNODC) stated in its executive summary: “According to the most recent data available, there has been little change in the overall global situation regarding the production, use and health consequences of illicit drugs”<sup>35</sup>.

Looking at drug related crime statistics, focussing on drug arrests, the South African situation seems to be in contradiction with the internationally view of stabilisation, given the increase experienced in drug related crime in South Africa.

Internationally heroin use has been stable. The limited information indicates that 0,4% of the global seizures of heroin occurred in Africa and indications are that heroin use has increased in Africa, due to the increasing importance of the route through Africa, for Afghan heroin. A drastic decrease in heroin seizures were reported from 2012 to 2013.<sup>36</sup>

Internationally cocaine use has decreased. It is estimated that 0,7% of the African and 0,4% of the Southern African population use cocaine. There are also indications that Africa is more and more a transit hub for cocaine destined for Europe.

Cannabis is on the increase as 9,3% of the global seizures were in Africa and it is estimated that 5% of the population uses cannabis in Southern Africa. This in comparison to 7, 5% in Africa and 3, 9% users globally.

Amphetamine Type Stimulants (ATS) showed an increase from 34 tons in 2009 to 88 tons in 2013. Methamphetamine was the main contributor. It is estimated that 0,7% of the Southern African Population uses ATS<sup>37</sup>.

The lack of statistics from Africa, including South Africa is clear when perusing the 2015 World Drug Report.

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<sup>35</sup> *United Nations Office on Drugs and Crime, 'World Drug Report 2015.'*, Online Available at: <http://www.unodc.org/wdr2015/en/previous-reports.html> retrieved on 14 August 2015

<sup>36</sup> <http://www.unodc.org/wdr2015/en/previous-reports.html>

<sup>37</sup> *United Nations Office on Drugs and Crime, 'World Drug Report 2015.'*, Online Available at: <http://www.unodc.org/wdr2015/en/previous-reports.html> retrieved on 14 August 2015

The latest SACENDU Statistics reported by 32 treatment centres for the Western Cape, shows Methamphetamine as the most common primary substance of abuse with 33% of patients admitted, reporting methamphetamine as their primary substance of abuse<sup>38</sup>. This correlates with the 2015 World Drug Report indicating an increase in ATS with methamphetamine the major contributor.

Looking at the analysis data in Bellville, in 2013, the main contributor to drug arrests are due to the possession of cannabis (38,8%) with methamphetamine second (21,7%) followed by cathinone (11,6%). The cathinone group includes meth-cathinone, its homologues (bath salts), and the Catha-Edulis plants. Methaqualone (mandrax) is the next on the list followed by heroin.

Interesting to note is the difference between Bellville and Athlone when it comes to Cannabis and Methamphetamine from 2013 to 2014. Bellville experienced a decrease in Cannabis but an increase in methamphetamine with Athlone just the opposite, reporting a cannabis increase and methamphetamine decrease. (This could potentially have something to do with the change in the socio-economic environment and the affordability of the drugs – something that needs further investigation).

Compared to the international trends, Bellville experienced the increase in methamphetamine but not the increase in cannabis while Athlone experienced the increase in cannabis but not the increase in methamphetamine.

In both stations the heroin arrests seem to have stabilised, contradicting the expected increase in the rest of the world, according to the 2015 World Drug Report.

Cocaine is expected to decrease worldwide. This drug has stabilised at very low levels at both stations.

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<sup>38</sup> Sacendu Project, 2015. *SA Health info Alcohol and Drug module*. [Online] Available at: <http://www.sahealthinfo.co.za/admodule/alcdrug.htm> [Accessed 05 05 2014].

Something to note is the high prevalence of methaqualone (not even monitored or reported on in the World Drug Report). Methaqualone is a problem unique to South Africa. This sleep inducing drug is used on its own, or smoked with cannabis, in the so-called white pipe.

The next observation is the lack of policing of the Medicines Act. The misuse of over-the-counter and prescription drugs like benzodiazepines is common, yet only 2 arrests in 2013 in Bellville has been reported. Not a single case of pre-cursor control has been mentioned in any of the reported or analysed data. The final observation is the increase in cases not being analysed at the laboratory from 2013 to 2014 at Athlone. This is a direct reflection on the type of arrests and/or the investigation done in these cases.

It is clear that international trends are not a definite indication of the extent and type of drug abuse in South African communities. More research, to better describe the situation and enable “evidence based strategies that are designed to meet the defined needs of communities”, as the minister mentioned in the NDMP, is needed.

It is also clear that the current measurement of success in the South African Police Service (amount of drug arrests), moves the focus from preventing drug abuse by supply reduction, (focus on dealers and manufactures) to achieving of goals (making a predetermined number of arrests). The goals and the measurement of success in government departments must be re- assessed.

## **Conclusion:**

It is clear from the literature review and assessed data that very little South African drug information and research is available in the public domain. The following suggestions/observations can be considered:

- The implementation and monitoring of the NDMP can improve to provide a better overall understanding of drug use and abuse in South Africa.
- Government Departments are all doing their bit to fight the battle against drugs and drug abuse but interdepartmental communication must be improved.
- Structures for the sharing of information between government departments should be established.
- Existing data should be combined to provide an overall view of the current situation.
- Private and parastatal organisations like the SACENDU Project must be utilised more effectively.
- The lack of proper research is evident and should be addressed.
- A database to see the overall view of the drug situation should be established.
- Funding for research must be made available to established institutions and universities.
- Supply reduction strategies must be reviewed to attack the drug value chain at the dealer/manufacturer's level, and focus more on precursor monitoring.
- Goals and the measurement of success in government departments must be re-assessed.
- Specialised investigators and training in precursor monitoring is needed.
- A stronger focus on the abuse of over the counter/prescription drugs is needed.
- Further statistical analysis of existing databases could form the basis for future research.

## 7.

# INSTRUCTION TO AUTHORS

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# **8.**

## **PART D**

### **APPENDICES**

## 8.1

# ACKNOWLEDGEMENTS

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## 8.2

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TABLE 1  
 CRIME STATS SA GENERAL DRUG STATISTICS

YEAR	SOUTH AFRICA	BELLVILLE	ATHLONE
2004	62 689	122	279
2005	84 001	131	345
2006	95 690	188	412
2007	104 689	220	498
2008	109 134	268	455
2009	117 172	314	519
2010	134 840	353	736
2011	150 673	511	1019
2012	175 823	735	1136
2013	206 609	776	990
2014	258 472	725	1111

<http://www.crimestatsa.com>

TABLE 2

## DRUG RELATED CRIME REGISTERED AT BELLVILLE SAPS

MONTH	2013			2014		
	TOTAL	POSESSION	DEALING	TOTAL	POSESSION	DEALING
JAN	85	83	2	53	48	5
FEB	71	70	1	56	49	7
MRT	82	81	1	71	66	5
APRIL	75	75	0	67	55	12
MAY	71	70	1	61	61	0
JUNE	63	62	1	29	29	0
JUL	64	63	1	54	51	3
AUG	61	59	2	67	67	0
SEPT	50	49	1	55	55	0
OCT	56	56	0	61	61	0
NOV	38	38	0	79	78	1
DES	62	59	3	67	65	2
<b>TOTAL</b>	<b>778</b>	<b>765</b>	<b>13</b>	<b>720</b>	<b>685</b>	<b>35</b>

TABLE 3

DRUG RELATED CRIME REGISTERED AT ATHLONE SAPS

MONTH	2013			2014		
	TOTAL	POSESSION	DEALING	TOTAL	POSESSION	DEALING
JAN	101	96	5	101	95	6
FEB	99	91	8	66	57	9
MRT	100	92	8	97	95	2
APRIL	116	112	4	100	92	8
MAY	114	107	7	62	60	2
JUNE	92	90	2	118	115	3
JUL	73	71	2	103	98	5
AUG	83	81	2	101	99	2
SEPT	120	115	5	136	128	8
OCT	86	80	6	118	116	2
NOV	87	85	2	97	91	6
DES	77	74	3	85	83	2
<b>TOTAL</b>	<b>1148</b>	<b>1094</b>	<b>54</b>	<b>1184</b>	<b>1129</b>	<b>55</b>

TABLE 4

2013 BELLVILLE DRUG CASES PER TYPE OF DRUG  
(AFTER FORENSIC CHEMICAL ANALYSIS)

	JAN	FEB	MRT	APRIL	MAY	JUNE	JUL	AUG	SEPT	OKT	NOV	DES	TOTAL
CANNABIS	1	1	1							1			4
CATHINONE	15	1	11	10	12	7	2	3	4	6	10		90
HEROIN	3	4	4	5	9	13	3	11	3	5	1	5	66
METHAMPHETAMINE	19	12	16	16	15	13	15	14	8	13	7	21	169
METHAQUOLONE	3	11	2	3	8	4	11	11	6	12	3	4	78
PSYLOCIN				2									2
COCAIN					1	1	1		1			1	5
ATS						2							3
NO DRUGS (NEG)		2	1		2					1		4	10
NO ANALYSIS	9	6	11	7	2	2	5	1	3	1	2	2	51
MEDICINE		1		1									2
<b>TOTAL</b>	<b>50</b>	<b>38</b>	<b>46</b>	<b>44</b>	<b>49</b>	<b>42</b>	<b>37</b>	<b>40</b>	<b>25</b>	<b>39</b>	<b>22</b>	<b>48</b>	<b>480</b>

TABLE 5  
 2014 BELLVILLE DRUG CASES PER TYPE OF DRUG  
 (AFTER FORENSIC CHEMICAL ANALYSIS)

	JAN	FEB	MRT	APRIL	MAY	JUNE	JUL	AUG	SEPT	OKT	NOV	DES	TOTAL
<b>CANNABIS</b>													
<b>CATHINONE</b>	12	1	9	2	4		1	2	1	2	10	10	54
<b>HEROIN</b>	5	4	13	11	2	2	2	4	5	2	6	5	61
<b>METHAMPHETAMINE</b>	8	21	19	15	15	7	14	20	10	24	22	14	189
<b>METHAQUOLONE</b>	9	9	7	3	4	4	14	11	10	5	7	15	98
<b>PSYLOCIN</b>													
<b>COCAIN</b>					1	2					1		4
<b>ATS</b>				1									1
<b>NO DRUGS (NEG)</b>	4		1	2	1								8
<b>NO ANALYSIS</b>	2	1	6	6	4	1	3	6		7	7	7	45
<b>MEDICINE</b>													
<b>TOTAL</b>	<b>40</b>	<b>36</b>	<b>50</b>	<b>40</b>	<b>31</b>	<b>16</b>	<b>34</b>	<b>43</b>	<b>26</b>	<b>40</b>	<b>53</b>	<b>51</b>	<b>460</b>

TABLE 6  
 2013 ATHLONE DRUG CASES PER TYPE OF DRUG  
 (AFTER FORENSIC CHEMICAL ANALYSIS)

	JAN	FEB	MRT	APRIL	MAY	JUNE	JUL	AUG	SEPT	OKT	NOV	DES	TOTAL
CANNABIS			2										2
CATHINONE													
HEROIN	6	4	3	9	6	12	5	9	14	8	6	8	90
METHAMPHETAMINE	34	24	27	31	29	18	16	16	23	24	17	22	281
METHAQUOLONE	19	25	19	33	21	13	11	15	27	16	18	13	230
PSYLOCIN													
COCAIN				1	1			2				1	5
ATS						1							1
NO DRUGS (NEG)		1	2	3	1		1	1	2	5	7		23
NO ANALYSIS	2	3	1	7	16	8	3	3	15	6	5	14	83
MEDICINE													
TOTAL	61	57	54	84	74	52	36	46	81	59	53	58	715

TABLE 7

2014 ATHLONE DRUG CASES PER TYPE OF DRUG  
(AFTER FORENSIC CHEMICAL ANALYSIS)

	JAN	FEB	MRT	APRIL	MAY	JUNE	JUL	AUG	SEPT	OKT	NOV	DES	TOTAL
CANNABIS		1											1
CATHINONE										1			1
HEROIN	7	4	11	15	3	7	7	8	7	11	4	10	94
METHAMPHETAMINE	24	14	32	18	19	30	23	13	23	37	15	15	263
METHAQUOLONE	25	6	20	14	4	13	18	8	16	2	11	6	143
PSYLOCIN													
COCAIN	2												2
ATS													
NO DRUGS (NEG)		2	1	1	2		1	1			1	2	11
NO ANALYSIS	4	5	10	12	11	15	14	20	25	28	8	13	165
MEDICINE													
<b>TOTAL</b>	<b>62</b>	<b>32</b>	<b>74</b>	<b>60</b>	<b>39</b>	<b>65</b>	<b>63</b>	<b>50</b>	<b>71</b>	<b>79</b>	<b>39</b>	<b>46</b>	<b>680</b>

TABLE 8  
% PER TYPE OF DRUG

	BELLVILLE						ATHLONE					
	2013			2014			2013			2014		
	NUMBER	%		NUMBER	%		NUMBER	%		NUMBER	%	
<b>CANNABIS</b>	4 (298)	38.8		(260)	36.1		2(433)	37.9		1(504)	42.7	
<b>CATHINONE</b>	90	11.6		54	7.5					1	0.1	
<b>HEROIN</b>	66	8.5		61	8.4		90	7.8		94	7.9	
<b>METHAMPHETAMINE</b>	169	21.7		189	26.3		281	24.1		263	22.2	
<b>METHAQUOLONE</b>	78	10.0		98	13.6		230	20.0		143	12.1	
<b>PSYLOCIN</b>	2	0.3										
<b>COCAIN</b>	5	0.6		4	0.6		5	0.4		2	0.2	
<b>ATS</b>	3	0.4		1	0.1		1	0.1				
<b>NO DRUGS (NEG)</b>	10	1.3		8	1.1		23	2.0		11	0.9	
<b>NO ANALYSIS</b>	51	6.5		45	6.3		83	7.2		165	13.9	
<b>MEDICINE</b>	2	0.3										
<b>TOTAL (Received at Lab)</b>	480			460			715			680		
<b>TOTAL (Received at Station)</b>	778			720			1148			1184		

\* The % calculation is based on the total amount of cases received at the Stations. The assumption is made that the cases not received at the lab constitutes small Cannabis case (Current Policy)

\*\* The number in ( ) is the assumed small Cannabis cases

## 8.3

### LIST OF REFERENCES REVIEWED

Alliance for Health Policy and Systems Research, 2004. Strengthening Health Systems: The Role of Policy and Systems research. 1 ed. Geneva: World Health Organisation.

Berg J, S. C., 2011. The Practice of Crime Prevention. Design and principles for more effective security governance. SA Crime Quarterly, Issue 36, pp. 23-30.

BEST DRUG INFI, 2010. heroin info. [Online]

Available at: [http://heroininfo.org/heroin\\_facts.html](http://heroininfo.org/heroin_facts.html)

Crime Stats SA, 2014. CRIMESTATSSA. [Online]

Available at: <http://www.crimestatssa.com/>

Department Social Development Central Drug Authority, 2013. National Drug Masterplan 2013-2017. [Online]

Available at: <http://www.dsd.gov.za/cda/>

[Accessed 26 06 2013].

Government Gazette No 32150, 2012. Medicines and Related Substances Act. Government Gazette, 12 MARCH, p. NO 32150 R.227.

Government Gazette NO 37495, 2014. Drug and Drug Trafficking Amendment Act. Government Gazette, 28 MARCH, p. NO. R. 222.

Howell S.,M., 2015 . Discounting the disparaged: Insight into the policing of Drug Abuse and Sex work in South Africa. In: H. S, ed. Blue Serge and Red Ribbons, Republic of South Africa. Cape Town: To be announced, p. Chapter 15.

Howell S., 2015. The South African National Drug Master Plan 2013-2017. A Critical Review. South African Journal of Criminal Justice, 28(1), pp. 1-23.

Howell S., 2015. 'We have to start showing who is boss now': Constructing Methamphetamine use and users in South African print media. CrimMedia Culture , 11(2), pp. 137-156.

National Drug Masterplan 2013-2017, 2013. Department Social Development Central Drug Authority. [Online]

Available at: <http://www.dsd.gov.za/cda/>

[Accessed 26 06 2013].

SA Government, 1965. ACT 101 OF 1965, medicines and related substances Act. [Online]

Available at:

[http://www.dsd.gov.za/cda/index2.php?option=com\\_docman&task=doc\\_view&gid=57&Itemid=39](http://www.dsd.gov.za/cda/index2.php?option=com_docman&task=doc_view&gid=57&Itemid=39)

[Accessed 17 01 2003].

SA Government, 1992. Drugs and Drug Trafficking Act, Act 140 of 1992. [Online]

Available at: <http://www.justice.gov.za/legislation/acts/1992-140.pdf>

[Accessed 30 09 2005].

SA Government, Act 70 of 2008. Prevention and Treatment for Substance Abuse. Government Gazette, 21 April, p. Vol526 No32150.

Sacendu Project, 2014. SA Health info Alcohol and Drug module. [Online]

Available at: <http://www.sahealthinfo.co.za/admodule/alcdrug.htm>

[Accessed 05 05 2014].

Sacendu Project, 2015. SA Health info Alcohol and Drug module. [Online]

Available at: <http://www.sahealthinfo.co.za/admodule/alcdrug.htm>

[Accessed 05 05 2014].

Scientific Working Group for the analysis of Seized Drugs, 2014. SWGDRUG Recommendations Edition 7.0. [Online]

Available at: <http://www.swgdrug.org/approved.htm>

[Accessed 14 08 2014].

United Nations Office on Drugs and Crime, 2014. 2014 World Drug Report. [Online]

Available at: [http://www.unodc.org/documents/data-and-analysis/WDR2014/World\\_Drug\\_Report\\_2014\\_web.pdf](http://www.unodc.org/documents/data-and-analysis/WDR2014/World_Drug_Report_2014_web.pdf)

Western Cape Provincial Government, 2011. National Drug Master Plan. [Online]

Available at: [http://www.capetown.gov.za/en/drugs/Documents/National\\_Drug\\_Master-Plan\\_2012-2016\\_June-20-2011.pdf](http://www.capetown.gov.za/en/drugs/Documents/National_Drug_Master-Plan_2012-2016_June-20-2011.pdf)

World Drug Report 2015, 2015. United Nations Office on Drugs and Crime. [Online]

Available at: <http://www.unodc.org/wdr2015/en/previous-reports.html>

[Accessed 26 June 2015].

## **8.4**

### **BUDGET**

No additional expenses were incurred with this research project. Analyses were performed by analysts employed by the SA Police Forensic Science Laboratory. All analysis was completed for criminal prosecutions. Data were obtained from existing databases.

## 8.5

# ETHICS APPROVAL



UNIVERSITY OF CAPE TOWN  
Faculty of Health Sciences  
Human Research Ethics Committee



Room E52-24 Old Main Building  
Groota Schuur Hospital  
Observatory 7925  
Telephone (021) 406 6338 • Facsimile (021) 406 6411  
Email: [shuretta.thomas@uct.ac.za](mailto:shuretta.thomas@uct.ac.za)  
Website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms)

30 October 2015

**HREC REF: 786/2015**

**Dr M Heyns**  
Pathology  
Forensic Medicine and Toxicology  
Falmouth Building

Dear Dr Heyns

**PROJECT TITLE: PILOT STUDY, INVESTIGATING THE CHEMICAL COMPOSITION OF ILLEGAL DRUGS AND THE ASSOCIATED PREVALENCE OF THE DIFFERENT DRUG TYPES IN THE WESTERN CAPE (MPhil Candidate - Mr CH Westraat)**

Thank you for submitting your study to the Faculty of Health Sciences Human Research Ethics Committee.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

**Approval is granted for one year until the 30<sup>th</sup> October 2016.**

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.  
(Forms can be found on our website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms))

**Please quote the HREC REF in all your correspondence.**

**We acknowledge that the student, Col Hendrik Westraat will also be involved in this study.**

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Yours sincerely

**PROFESSOR M BLOCKMAN**  
**CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE**

Federal Wide Assurance Number: FWA00001637.

Institutional Review Board (IRB) number: IRB00001938

This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP), South African Good Clinical Practice Guidelines (DoH

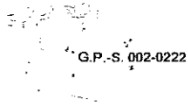
HREC 786/2015

2006), based on the Association of the British Pharmaceutical Industry Guidelines (ABPI), and Declaration of Helsinki (2013) guidelines.  
The Human Research Ethics Committee granting this approval is in compliance with the ICH Harmonised Tripartite Guidelines E6: Note for Guidance on Good Clinical Practice (CPMP/ICH/135/95) and FDA Code Federal Regulation Part 50, 56 and 312.

HREC 786/2015

## 8.6

# SOUTH AFRICAN POLICE SERVICE APPROVAL



G.P.-S. 002-0222

SAP 21

SUID-AFRIKAANSE POLISIEDIENS



SOUTH AFRICAN POLICE SERVICE

AMAPOLISA OMZANTSI AFRICA

Privaatsak/Private Bag X 3  
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Verw/Ref	0420253-8	Office of the Section Commander Forensic Science Laboratory Chemistry Section Western Cape Private Bag X9 7506 PLATTEKLOOF
Navrae/Enq	Col. HJJ Westraat	
Telno	(021) 929 0874	
Faks/Fax	(021) 929 0874	

2014-11-03

The Divisional Commissioner  
**FORENSIC SERVICES**

### COMPLETION OF M Phil, BIOMEDICAL FORENSIC SCIENCE: COL HJJ WESTRAAT

1. I'm currently a part-time student at the University of Cape Town. I have completed 7 of the 8 modules for the M Phil degree in Biomedical Forensic Science. Completed module includes:
  - 1.1 Forensic Toxicology
  - 1.2 Molecular Forensics (DNA)
  - 1.3 Quantitative Research Methodology
  - 1.4 Biostatistics
  - 1.5 Applied Forensic Science
  - 1.6 Pathology
  - 1.7 Anthropology and Anatomy
2. The final step to completion of the degree is a research dissertation that I intend completing in 2015.
3. No additional costs, time or instrumentation would be utilised other than the normal work that would be conducted for the criminal Justice system. The results would just be formalised in 'n database to allow me to draw conclusions.

COMPLETION OF M Phil, BIOMEDICAL FORENSIC SCIENCE: COL HJJ WESTRAAT

- 4 Find attached the proposal for my study.
- 5 Your favourable approval, comments or suggestions would be appreciated.

COMMANDER: CHEMISTRY UNIT: WESTERN CAPE  
 (HJJ WESTRAAT)  
 DATE:

~~RECOMMENDED / NOT RECOMMENDED~~ *Results to be presented to SAMS prior to submission. Activities to be scheduled not to impact on availability of the Chemistry section. Information obtained from the study will be valuable to SAMS.*

BRIGADIER  
 REGIONAL HEAD: FSL : WESTERN CAPE  
 JD MEINTJES  
 DATE: 14/1/13

~~RECOMMENDED / NOT RECOMMENDED~~ *Criminal or civil records are not amongst the Section 15 of PAIA - Voluntary disclosure and automatic availability of certain records owing to their nature and/or prima facie evidence. Section 39 of PAIA must be adhered to.*

BRIGADIER  
 FORENSIC SCIENCE LABORATORY: QUALITY MANAGEMENT  
 TL MULAUDZI  
 DATE: 2014/11/13

~~RECOMMENDED / NOT RECOMMENDED~~ *National Instruction 1/2006 must be followed*

MAJOR GENERAL  
 HEAD: FORENSIC SCIENCE LABORATORY  
 (E K NGOKHA)  
 DATE:

2015-01-21

COMPLETION OF M Phil, BIOMEDICAL FORENSIC SCIENCE: COL HJJ WESTRAAT

RECOMMENDED / ~~NOT RECOMMENDED~~

The research plan should be presented to Technical Forum before 1 Feb 2015. The presentation of the research to the community & SAPS could be of high value.

BRIGADIER  
SECTION HEAD: TECHNICAL MANAGEMENT  
L FRAZENBURG

DATE: 2014-11-25

RECOMMENDED / ~~NOT RECOMMENDED~~

The research is supported provided the proposal is also presented to the Technical Forum + thereafter monitored + final results + findings presented + approved before release + submitted to UCT. must also be submitted for approval to the warty as per NI 1/2006

BRIGADIER  
ACTING SECTION HEAD: QUALITY MANAGEMENT  
JH SMITH

DATE: 2014-11-25

APPROVED / NOT APPROVED

LIEUTENANT GENERAL  
DIVISIONAL COMMISSIONER: FORENSIC SERVICES  
JK PHAHLANE

DATE:

*South African Police Service*



*South African Police Service*

Private Bag 3322

Fax No. 012 421-0410

Your reference: 4/1/2

THE DIVISIONAL COMMISSIONER

My reference:

FORENSIC SERVICES

Enquiries: Maj NM Rababalela

PRETORIA

Tel: (012) 421-0204

0001

**The Head  
STRATEGIC MANAGEMENT**

**RE: RESEARCH REQUEST: COMPLETION OF M Phil BIOMEDICAL  
FORENSIC SCIENCE: UNIVERSITY OF CAPE TOWN, M PHIL DEGREE:  
RESEARCHER: HJJ WESTRAAT**

- 1 Your communiqué with reference 3/34/2 dated 13 June 2014 bears reference.
- 2 Approval is hereby granted to the above-mentioned request, provided that the applicable directives on conducting research are adhered to.

**LIEUTENANT GENERAL  
DIVISIONAL COMMISSIONER: FORENSIC SERVICES  
JK PHAHLANE**

**Date: 2015-02-10**