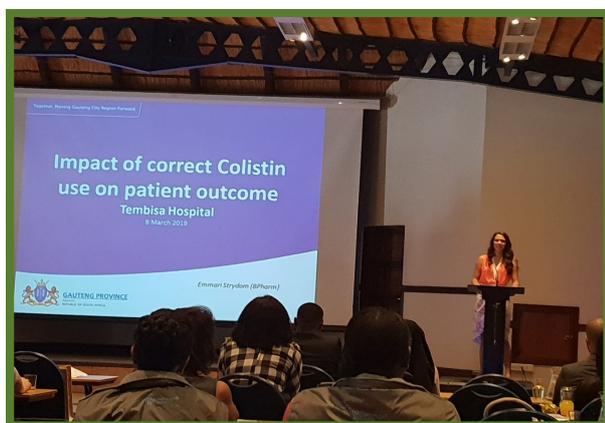


## SAAHIP CONFERENCE 2019 AT THE CHAMPAGNE SPORTS RESORT

### 50 Shades Brighter

*Judy Coates*



*Emmarie Strydom*

Day one commenced midday with teams all arriving dressed in Branch coordinated colour schemes. The buzz throughout the Delegations was apparent.

The first afternoon focused on the AGM which included a presentation on the Angels initiative of Boehringer Ingelheim, along with a fun interaction session with the audience, facilitated by Shawn Zeelie. A mid-session 'sushi making' took place sponsored by Adcock Ingram.

The day ended with Fresenius Kabi hosted "Birds of a Feather Flock Together" evening where all Branches arrived themed to the evening. A special thanks to Fresenius Kabi for a fun filled evening.



*Hethel Chouhan*

Day two kicked off with a series of academic presentation focused on antimicrobial Stewardship, both through podium and poster presentations. The critical role of the pharmacist in contributing meaningfully to AMS was emphasised. A need to increase education content at the pharmacy school level to ensure that new graduates are informed on their responsibilities in this arena. There are clear guidelines available and these should be followed.

Academic Session B moved to Perceptions of Pharmacotherapy, both through podium and poster presentations. The vital role of the pharmacist in educating patients about the benefits of vaccination was emphasized. A need to extend the level of sensitization for HCW to improve ARV ADR reporting, and ensure all HCW are aware of their responsibilities with respect to ADR reporting. Practices regarding antibiotics amongst public HCW were shared. Interesting perceptions on automation and impact on the pharmacist were shared.

The third academic session zoned into Patient Safety. Challenges wrt antirabies vaccines, CDI treatment, Major anti-vaccination themes, Patient Safety Culture, Sub optimal vaccination coverage, Framework for MDR-TB Services and Chronic Obstructive Pulmonary Disease (COPD) were all discussed.

The fourth session kicked off with an inspirational "50 years in Pharmacy has made my life 50 shades brighter" by Susan Buekes. The talk received a standing round of applause as the hearts of all in attendance were touched. Wendy then shared "Storms in a Tea Cup or Drops in the Ocean", a personal story of a patient "Mr Hope" and the emphasis on the need for multi-disciplinary approaches.

*.../ continued on page 12*





*Halima Ismail*

The SAAHIP Clinical Skills Winners shared their story with passion, demonstrating why they were in fact the selected winners.

The session was closed with an elegant speech from the PSSA President, Stéphan Möller, read by PSSA Deputy President, Joggie Hattingh, shining a light on all the elements that make being part of SAAHIP an honour and opportunity to make a difference. Special congratulations were conveyed to Ronel Boshoff and Ria Pretorius on their election as Fellows of the PSSA, the most prestigious award of the Society.

The conference afternoon closed with the presentation of the YPG Innovation Project for 2019, which was accompanied by a sharing of the journey by the 2018 candidates and their excellent progress to date.

Day Two concluded with Sexy 21 Evening hosted by Equity.

The third day commenced with podium presentations on Quality Medicines and Supply. A need for a central database is key to address clinic hopping. This represents an opportunity for the innovative amongst us.

As a first-time participant it was so interesting to hear about the array of research taking place across the councillors participating. I believe there would be great value in ensuring key findings reach the right bodies to inform change going forward. Patient centered care was discussed and emphasis was placed on a need to change and/or adapt practices in the pharmacy to achieve patient orientated care.

The outcomes of a descriptive and quantitative study on What happens to Medicines at home was shared. A need was stressed for counselling of patients on appropriate disposal of unused medicines. Appropriateness of Medication Administration was discussed, along with providing a useful guideline in this regard, ending with an inspirational quote **“Each one can make a difference but together we can make a change”**. The session closed with two poster presentations covering Chronic Medicine Dispensing and Distribution and Prescribing and Dispensing of Pain Medication. Posters worth reviewing to learn more.

The Delegates then received an informative address by Amos Masango (Registrar SAPC). Presentation available on request from the office. All eligible candidates encouraged to participate in the 2019 SAPC National Pioneer Pharmacy Awards.



*Shaista Nabee*

Morning tea was followed by a free-flowing interactive workshop on “Ideal Hospital” facilitated by Andy Gray. The dynamics of IHRM and its realisation were discussed, considering information available (relative to information that was available in the realisation of the ideal clinic), differences between private and public, NHI, OHSC, integration considerations, checklists and their impact, focus process or impact on the patients, avoid all this becoming an event or an inspection - avoid window dressing - practices need to change, a need for a ratio between the number of pharmacists to number of patients (including consideration to be given to the category of patient) and more.

The formal education sessions of the conference closed with the Pearl Presentations. “Quality of life, health and something in between” focusing on SMART goals, an awesome video clip on “Adverse Drug Reactions: Do it Yourself”. “Spread the Word, NOT the Bug” looking specifically at the shingles vaccine. “To Breath or Not to Breath” - diagnosing and treating obstructive sleep apnoea (OSA). “Pharmacy is Not for Sissies” with a hysterical look at starting your own Pharmacy. “Stop - Just Don’t Do It” encouraging all to start a movement of change for good - become a lone nut or the first follower. “Wonder Weed to the Rescue” with a good laugh and look at cannabis.

In the usual spirit of the conference an evening function entitled “50 Shades Brighter” Neon Formal Party, partially sponsored by Sanlam, was hosted to allow further networking amongst all.

.../ continued on page 13



Congratulations to our SAAHIP SG presenters - Emmarie Strydom, Halima Ismail, Jacqueline Visser, Hethel Chouhan and Shaista Nabee - for representing Southern Gauteng on the academic front. Posters included for ease of reference.

A further thank you to all our contributors to the Smile Foundation. LINK <http://southafrica.operationsmile.org/>

The SAAHIP Southern Gauteng Branch wishes to thank Adcock Ingram for the amazing branded blue team shirts and Fresenius for the classy branded team jackets.

The SAAHIP SG Delegation wishes to thank Tabassum, Thanushya and Jacqui for their extensive efforts in preparing for the team's amazing Conference 2019 experience, and Shoni for providing leadership while Tabassum was on leave.



# A Comprehensive Evaluation of the Prescribing and Dispensing Practices of Pain Medication in Community Health Centres within the Johannesburg Metro Health District

Bibi Fatima Choonara, Farahnaaz Suliman, Tabassum Chicktay, Halima Ismail

Hillbrow CHC, Mofolo CHC, Itirelang CHC, Stretford CHC, Alexandra CHC, Discoverers CHC, Zola CHC, Chiawelo CHC, Lenasia Ext 5 Clinic

## INTRODUCTION

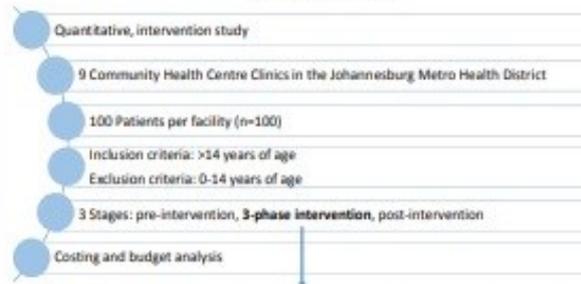
A multitude of people visit clinics and other healthcare institutions every day in seek of relief from pain. Treatment of pain is an integral part of all health professionals' education, training and practice. In South Africa, public health institutions adhere to Standard Treatment Guidelines (STGs) and Essential Medicine Lists (EML) that are set out by the National Department of Health (NDOH) in order to ensure that cost-effective treatment options are available to citizens of the country. Pain management often includes the use of opioid drugs which raises concerns of abuse if they are over prescribed. General observations of prescriptions received by the Hillbrow CHC pharmacy revealed a pattern of multiple pain medications prescribed for a single patient. These observations prompted an investigation which led us to the aim of this study.

## AIMS & OBJECTIVES

The aim of this study is to investigate the prescribing and dispensing practices of pain medication and rationality of use in clinics within the Johannesburg Metro Health District. This will be achieved through prospective data collection and analysis. This research may potentially:

- Yield interventions to promote rational use and adherence to STGs
- Reduce the budget spent on pain medication
- Mobilize healthcare decision makers

## METHODOLOGY



## RESULTS & DISCUSSION

Table 1: The number of patient prescriptions that were identified as non-rational medicine use

Facility Name	Non-rational use (Amount of patients)
Hillbrow CHC	37
Chiawelo CHC	91
Zola CHC	12
Discoverers CHC	17
Alexandra CHC	73
Stretford CHC	6
Itirelang CHC	18
Mofolo CHC	44
Lenasia Ext 5 Clinic	3
<b>Total</b>	<b>301</b>

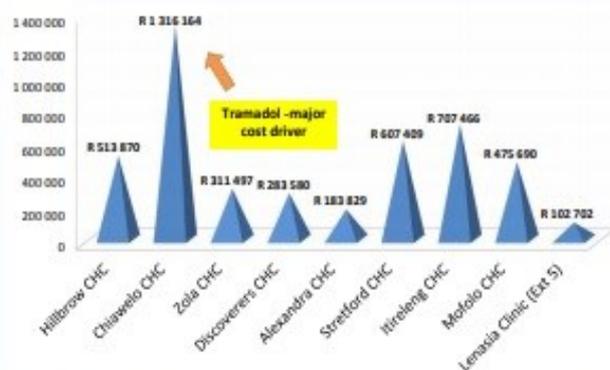


Figure 1. Graph indicating the amount spent on pain medication for the April 2017-March 2018 financial year

The types of pain medication prescribed to patients, the number of pain relievers dispensed per patient and the classification of pain as per the STGs was extensively evaluated. Based on the results obtained, a total of 301 patients were identified as non-rational use with Chiawelo CHC being the highest contributor to this figure as shown in Table 1. This translates to the amount spent on pain medication for the April 2017-March 2018 financial year as shown in Figure 1. with facilities arranged in descending order from the highest headcount (Hillbrow CHC) to the lowest headcount (Lenasia Ext 5). Chiawelo CHC spent a staggering 1.3 million on pain medication with tramadol being the major contributor to this amount. Hillbrow CHC spent less than half the amount that Chiawelo spent on pain medication despite Hillbrow CHC having the highest headcount. Furthermore, the success of the 3-Phase intervention was measured by comparing the pre- and post-intervention results for Hillbrow CHC as shown in Table 2. A significant difference in the rationality of use was observed post-intervention with only patient being identified as non-rational use.

Table 2 Comparison of pre- and post-intervention results at Hillbrow CHC

	Pre-intervention (number of patients)	Post-intervention (number of patients)
Female patients	57	26
Paracetamol prescriptions	83	89
Ibuprofen prescriptions	65	33
Tramadol prescriptions	19	12
Amitriptyline 25mg prescriptions	16	10
Acute pain prescriptions	88	86
Non-rational medicine use	37	1

## CONCLUSIONS

The aim of this study was achieved as the results obtained provided a comprehensive insight into the prescribing and dispensing practices of pain medication, as well as, the rationality of use in clinics within the Johannesburg Metro Health District. It is recommended that a standardized 3-Phase intervention be rolled out at all facilities tailoring it specific to problem areas identified at each facility. Although interventions can be initiated at facility level, a multi-faceted approach is needed with key stakeholders at facility, district, provincial and national level coming together to yield the maximum impact and significantly improve the quality of care for citizens of the country.

## REFERENCES

- Hahn, K.L. (2011). Strategies to Prevent Opioid Misuse, Abuse, and Diversion that May Also Reduce the Associated Costs. *American Health Drug Benefit*, 4, 307-314.
- Mendly, W. (1990). The definition of pain. *European Journal of Psychiatry*, 6, 153-159.



# Knowledge, Attitude and Prescribing practices regarding antibiotics among public health care workers in the West Rand District: 2018

Nicole Moodley, Jacqueline Visser  
West Rand Regional Pharmacy

## Introduction

In 2017 a Drug Utilization Review (DUR) of amoxicillin identified the prevalence of irrational prescribing of antibiotics by primary healthcare clinicians in the West Rand District Area. The study further concluded that more research regarding prescribing practices amongst clinicians was required.

Knowledge, attitude and practice (KAP) surveys provide insight regarding irrational prescribing of antibiotics as well as identifying knowledge gaps and negative attitudes to aid targeted interventions in addressing these shortcomings.<sup>2</sup>

## Methods & Procedures



A self developed KAP tool was distributed among pharmacists for input



Self administered questionnaires were distributed through various platforms to prescribing nurses and doctors working in 48 PHC facilities



103 of 150 questionnaires were returned and analysed



There was no incentive for subjects to participate and participation was done purely on a voluntary basis

## Results & Discussion

Knowledge question scores showed that whilst general antibiotic knowledge was fair, clinicians did not know the PHC standard treatment guidelines for common conditions.

The PHC EDL 2014 gives the following guidelines:

Indication	PHC EDL Dose
Impetigo	Cephalexin, oral 12-25mg/kg/dose 6 hourly for 5 days or Flucloxacillin, oral 12-25mg/kg/dose 6 hourly for 5 days
Acute Bronchitis in Adults or Adolescents	HIV-infected patients: Amoxicillin, oral, 500 mg 8 hourly for 5 days.

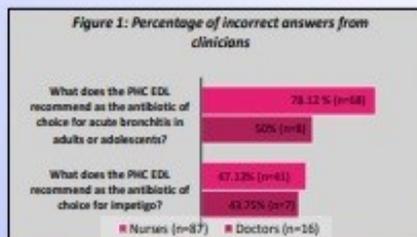


Figure 1 shows that between 43 to 78 % of prescribers answered incorrectly when asked to prescribe the recommended antibiotic for conditions as per PHC EDL Guidelines.

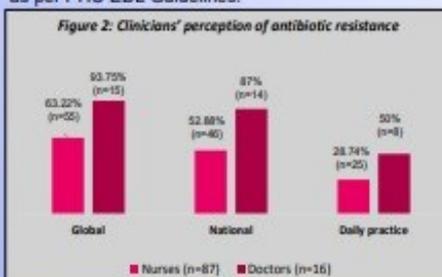
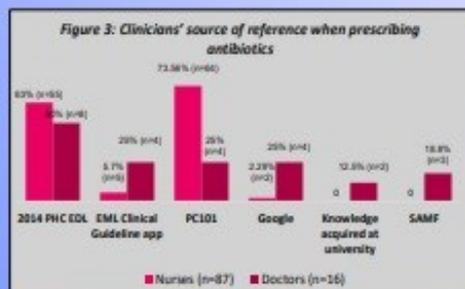
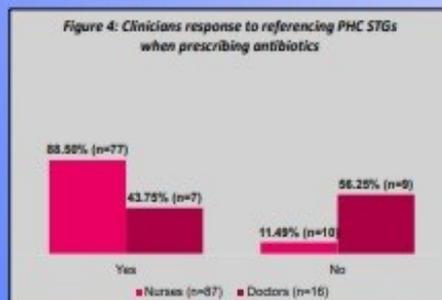


Figure 2 shows that less than 50% of clinicians perceived antibiotic resistance to be part of their daily practice and as a result could not see their role in curbing resistance.



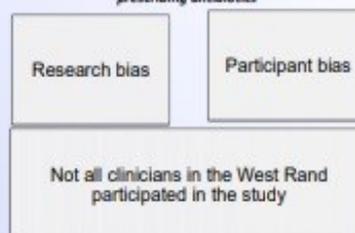
Prescribing practices showed that majority of nurses referenced standard treatment guidelines whilst doctors had a wider variety of references when prescribing antibiotics.



88.5% of nurses indicated that they refer to the PHC STGs when prescribing antibiotics vs 56.25% of doctors that indicated that they do not consult PHC STGs when prescribing antibiotics.

## Limitations

Figure 5: Clinicians' compliance to PHC STGS in prescribing antibiotics



## Conclusion

The overall knowledge score for doctors and nurses were relatively acceptable although concern existed when answers to individual questions were analysed. There are clear misconceptions amongst prescribers regarding the development of antibiotic resistance. There was significant differences in attitudes and practices between doctors and nurses. Prescribers must be made aware of the impact that they have on emerging resistance as well as their role as antimicrobial stewards.

From this evidence it is recommended that an integrated training initiative within the district be undertaken to improve the knowledge, attitudes and prescribing practices. A post intervention study needs to be conducted to assess the effectiveness of trainings.

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GAUTENG PROVINCE  
HEALTH  
REPUBLIC OF SOUTH AFRICA



# The Future of Pharmacy: Perceptions of automation on the pharmacy profession

Hethel Chouhan

Hillbrow Regional Pharmacy.

## INTRODUCTION

South Africa is in the process of implementing universal health care coverage in the form of National Health Insurance, with the objective of closing the gap between public and private healthcare. Pharmacists play a critical role in this entire process. As part of NHI systems Right to care and Department of Health have been working together to roll out pharmacy automation since 2016. There has been limited assessment done on the impact of pharmacy automation on the pharmacy workforce particularly in the South African Healthcare department.

## OBJECTIVES

To determine the attitude and perceptions of pharmacy professionals towards automation

To compare the perceptions between professionals in various sectors.

To observe if age, gender, role played and number of years of work experience had any significance.

## METHODS

A mixed study approach using both qualitative and quantitative methods was used. Fields of pharmacy included were: Public sector, Private hospital, Retail/Community and Academia.

Ethical Approval was given by the Research Ethics Committee of the University of Pretoria (Ethics Reference Number: 105/2018)

Each participant had to consent prior to taking part in the study.

The study design used a questionnaire which included a mixed series of questions, a few demographic and the majority being opinion based.

The questionnaire was made available both as a hardcopy and electronically using cognito forms and distributed through social media and emails.

A quantitative analysis was done using Fishers Exact Test, One-Way Anova Test and Excel.

## RESULTS & DISCUSSION

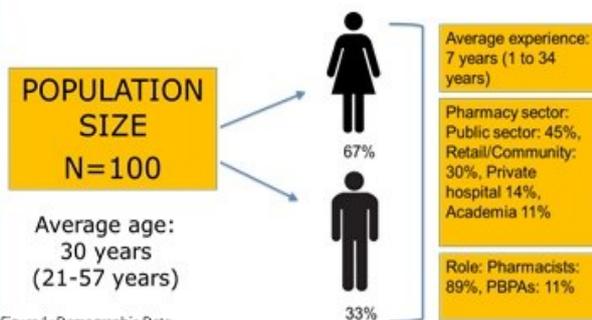


Figure 1: Demographic Data

## RESULTS & DISCUSSION

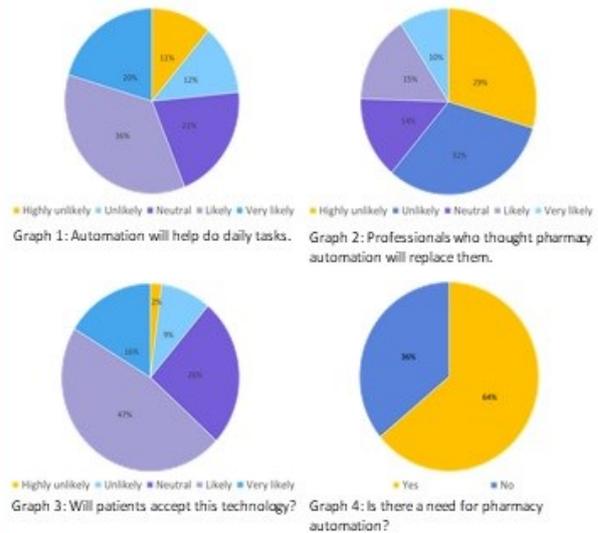


Figure 2: Implementation of Automation

## CONCLUSION

No correlation was found between gender, role or pharmacy sector ( $p>0,05$ ), meaning the difference in distribution is due to chance and is not significant. However, there was a correlation between age and number of years of work experience ( $p<0,05$ ). Older pharmacists with a greater number of years of work experience do not feel threatened by automation, as they feel confident in the importance of their role in pharmacy. They understand that pharmacy is not just about dispensing medicines but more about applying their skills and knowledge of pharmacy. Overall there was a positive perception towards automation (Fig. 2). It is essential that more automated systems be introduced into pharmacy as well as an expansion of eHealth, which will have a significant impact on NHI. Automated pharmacy systems will replace the more labour-intensive tasks, and allow pharmacy professionals to focus on more specialized skills such as clinical pharmacy, public health and working together in multi-disciplinary teams. Going forward there is a need to educate and expose pharmacy professionals on Pharmacy automation. Automation provides a re-engineering model for pharmacy practice and it would be wise to progress with evolving times.

## REFERENCES

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Gray, A. 2016a. L. and rugel 2016. Healthcare and pharmacy practice in South Africa. The Canadian Journal of Hospital Pharmacy. 69(2): 48-51.





## Congratulations to Stavros Nicolaou

I would like to offer my sincerest congratulations to DR. Stavros Nicholaou, on receiving the prestigious award of Dr of Medicine Hon. Causis.

The Southern Transvaal Branch of the PSSA, was instrumental in establishing the Chair of Pharmacy at Wits. university.

If my memory serves me correctly, Stavros was amongst the first graduates.

This is an award very richly deserved for flying the Pharmacy South Africa “kite” worldwide. Stavros, entered the profession as a visionary, and was able by sheer hardwork, achieved his goals.

Congratulations Stavros, you make us all very proud.

Bernard Lapidus F.P.S  
Past President S.A.A.R.P.  
Toronto

## SAAPI What's Coming?

Workshop : “CTD Module 3”  
Date: 30th May 2019  
Time: 09:00 – 16:00  
Venue: Glenhove Events Hub  
Presented by: Pharma Training

Workshop : “Cold Chain and Temperature Management”  
Date: 13th June 2019  
Time: 09:00 – 16:00  
Venue: Glenhove Events Hub  
Presented by: Strategnos

Workshop : “New MCA Code of Marketing Practice v11”  
Date: 19th June 2019  
Time: 09:00 – 13:00  
Venue: Glenhove Events Hub  
Presented by: Marketing Code Authority (MCA)





## What Pharmacists are Really Thinking

## The Emerging Role of the Oncology Pharmacist

Lailaa Cajee

In South Africa, the National Cancer registry states that there are over 100,000 cases of cancer **diagnosed each year**, opposed to 14 million new cases globally which is expected to increase to 22 million in 2020! The statistics are frightening and serve as a reality check for all, and this article highlights the implications on us as pharmacists- *the Custodians of Medication*.



Logically increased numbers of persons diagnosed with cancer will result in a greater need for specialized medications. As the oncology drug market increases its offering, cancer research and the number of clinical trials will escalate and lead to greater usage of hazardous/antineoplastic drugs! The need for knowledgeable and skilled health care practitioners (Pharmacists) will surge, and they will play a pivotal role in the delivery of medication and care to patients living with cancer!

### Oncology Pharmacy in the South African Context

Oncology Pharmacy is a niche field in the Pharmacy Industry. It attracts very few pharmacists. Amongst the many reasons; it is not a recognized specialty and pharmacists fear the daily exposure to hazardous drugs. These drugs are often not well understood or marketed with limited clinical knowledge within the pharmaceutical industry. To add to this, there are currently no guidelines and regulations other than a small subsection (2.17.3 in Good Pharmacy Practice) that stipulates the minimum standards for cytotoxic preparation and reconstitution services. Until recently there were no formalized training programs available. The Wits Pharmacy Department, in its efforts to INVEST in the future of the pharmacy profession and build capacity, now offer a short course in Aseptic Technique which aims to bridge this gap. This course will equip pharmacists interested in this sub-sector with the necessary acquaintance and knowledge re-

quired to work with hazardous/antineoplastic drugs.

### Fields of Application, Roles and Responsibilities

The Fields of application for the Oncology Pharmacist includes roles in administering Clinical trials, Research and development, Drug Utilization Reviews, Marketing, Wholesale and Distribution. Added to this, and of paramount importance, is the skills training required to work in a mixing facility.

The role and responsibilities of an Oncology Pharmacist is vast and includes, but not limited to:

- Counseling emotionally charged patients
- Analyzing, interpreting and dispensing prescriptions;
- Aseptic preparation of chemotherapy. In the words of Marc Summerfield: "Preparing chemotherapy is not like preparing a milkshake! Each preparation is individualized and specific to the patient's weight, height, status and blood work. This requires accuracy, the ability of the pharmacist to manipulate and interpret equipment, sterility and time."
- Minimizing drug waste, managing drug shortages and decreasing exposure to hazardous drugs.
- Source of expert information for staff and patients
- and more.

The oncology pharmacist is often one of the few team members who has a holistic understanding of the safety, efficacy, pharmacological, and financial components of patient care.

### Future Direction

The changing landscape of healthcare, the rapid increase in patient numbers and an ever-evolving approach to cancer care which includes oral therapies, targeted therapies, and personalized medicine emphasizes the indispensable need for an oncology pharmacist! There are areas for growth in oncology pharmacy in South Africa. These opportunities include having a greater presence in mixing facilities, developing medication therapy management services and being involved in cancer prevention via newer lifesaving therapies.





## Medicine in the Bible (Part 2)

*Ray Pogir*

In the 2019 Edition 1 of the Golden Mortar we quoted from the book of Ezekiel where it states that leaves of the trees will be for medicine.

In this article we will look at some the most often mentioned plants, some which are still used by alternate healers; traditional healers; and also a few monographs from early editions of the British Pharmaceutical Codex. No Biblical medicinal or medical texts exist. This is probably due to statements such as in Exodus 15:26 "I am the God that heals you". Thus healers were regarded as instruments appointed by God and performed their functions under his guidance.

Some 180 species of plants are mentioned and difficulties do exist with the identification of some of the plants and their location, but in many instances the plant can be established without doubt.

One of the often-mentioned plants is Myrrh. This is most probably due to its slightly antiseptic properties as well as a distinctive aromatic smell. In Exodus 30, 23-25 it states "Take thou also unto thee principal spices of pure myrrh five hundred shekels and sweet cinnamon half as much, even two hundred and fifty shekels, and of sweet calamus two hundred and fifty shekels, and of cassia five hundred shekels, after the shekel of the sanctuary, and of olive oil a hin. And thou shalt make of it an oil of holy ointment compound after the art of the apothecary: it shall be an holy anointing oil."



*Fig*



*Olives*

A number of trees are mentioned as having medicinal properties. Three, in particular, the fig, the olive and the vine are mentioned a number of times.

The fig tree is mentioned over 50 times. Of special interest is that it is mentioned twice as an instruction from God for a specific healing purpose. In 2 Kings 20: 17 the ailing king repents for his bad behavior and God instructs Isaiah to apply a lump of figs to what is presumably an infected boil. The king recovers. In Isaiah 38:1 he repeats that he received an instruction from God to lay a lump of figs on the boil and the king recovered.

Since dried figs contain about 50 per cent of invert sugar and some sucrose there would be an osmotic drawing effect which cured the boil.

Olive trees are still some of the most well-known and valuable trees. Some records claim that there are olive trees over 4,000 years old which still produce olives. Mentioned over 60 times in the Bible, olive oil is an ingredient of ointments and oils, mainly in applications to the skin. In the parable of the Good Samaritan Luke 10:34 it states, "and he went to him, and bound up his wounds, pouring in oil and wine".

The vine is mentioned over 70 times in the Bible. On its own as wine or mixed with other plant extracts it was used for a number of conditions such as melancholy, pain and in topical applications. We can only wonder if the medical benefits ascribed to red wine now-a days were known in Biblical times.

This brief description of some of the Biblical Medicines serves only as an introduction to the fascinating history of plants used for healing in Biblical times.



*Grapes*



## Perfumery and Perfume Bottles

Ray Pogir

Perfume is mentioned in the records of ancient China, Greece, and Rome. The name is derived from the Latin “per fumum”, through smoke. This is from burning various substances, mainly from plant material, which produced pleasant odours during religious ceremonies.

Over the ages this original use of perfume changed and eventually came into everyday use.

It appears that Cleopatra used perfumes effectively against Julius Caesar and Mark Anthony.

The art of using perfume in various preparations such as oils, salves and powders started in France in the Renaissance and led to the French becoming leaders in the development of perfumery extracts, from plants, mainly flowers.



The discovery by chemists of amazing synthetic fragrance bases in the late 1800's profoundly influenced the science of perfumery, some prefer to call it an art. There was rapid progress from the use of plants to the production of sophisticated combinations and blends. This gave rise to the development of the world famous brand names of today.

At about 1907 a historic event occurred in the world of perfume.

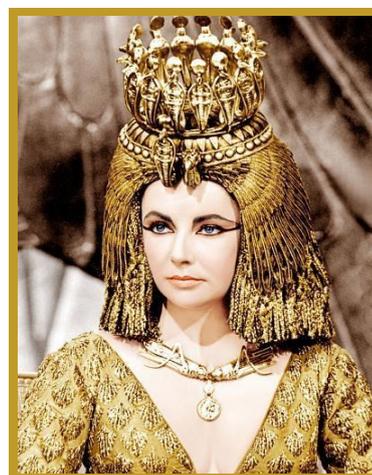
Francois Coty had a vision that his lovely scents should be presented in beautiful bottles. The perfume industry then was packaging its products in bottles of square or rectangular shapes which made for easy display. Coty approached Rene Lalique, one of the most talented designers of the 20<sup>th</sup> Century, to design exquisite engraved bottles and luxury boxes for his unique perfumes.



This stroke of genius became the foundation of the partnership of perfume with the high fashion industry. French countries began to market perfumes to go with their high fashion clothing designs.

Intense competition led to the development of a variety of beautiful flacons for the perfumes in the names of world famous fashion designers. The S.A National Pharmacy Museum has a collection of about 1000 perfume bottles from a wide range of designers and fashion houses. These have been presented to the museum by the houses themselves and also by pharmacists who, sadly, are no longer the leaders in the retailing of perfumes that they once were.

The photographs are examples of a few of the bottles on display in the foyer opposite the museum.



Cleopatra



## The Southern Gauteng Branch of PSSA cordially invites you to attend our April CPD

**Date:** Tuesday 16 April 2019  
**Time:** 19h00 for 19h30  
**Venue:** Glenhove Events Hub  
52 Glenhove Rd, Melrose Estate

**Cost:**  
PSSA Members - Free  
Non-members - R150  
Students - Free (Please produce your Student Card)

*Refreshments will be provided*

### Technology as an enabler in creating a patient-centric culture

**Presenter:** Saul Kornik (Healthforce)

Proudly sponsored by  Clarivate Analytics

RSVP Cecile at 011 442 3615 or [ceciler@pssasg.co.za](mailto:ceciler@pssasg.co.za)



## Rethink Your Drink: "The Low-Down" on Energy Drinks

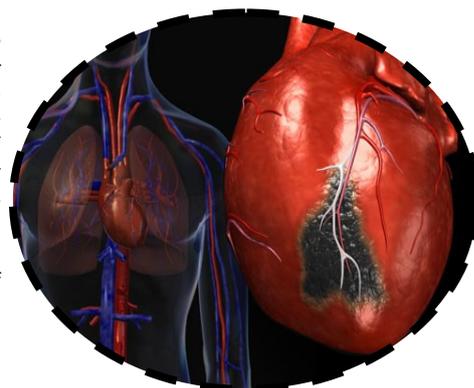
Lynn Lambert (BPharm)  
Amayeza Information Centre

The increasing burden of non-communicable diseases (NCDs) remains a public health challenge worldwide. In South Africa, changes to diets and lifestyles have had significant consequences for NCDs.

Cardiovascular disease is among the leading causes of mortality, and more and more South Africans are becoming overweight and obese, resulting in the increasing incidence of diabetes mellitus in our population. The increased consumption of processed food and energy-dense drinks is a major contributing factor to these trends. Statistics show a staggering 70% increase in the number of energy drinks sold over a five-year period. The consumption of energy drinks is clearly a rapidly growing sector within the South African soft drink market.

By definition, energy drinks are non-alcoholic beverages that contain caffeine, sugar and other stimulants such as taurine, ginseng, guarana and are marketed to improve mental and physical performance. The unique characteristic of energy drinks is their content of caffeine, which is substantially higher than most other caffeinated drinks.

Caffeine usually reaches its peak concentration approximately 30-120 minutes after consumption. Caffeine contained in coffee or tea is derived from a naturally-occurring plant-based source, unlike that of energy drinks which typically contains a synthetic form of caffeine. Other ingredients such as guarana (a stimulant), yerba mate, taurine are often included in energy drinks and are another source of caffeine-like substances. As such, the actual amount of caffeine on the label may not be a true reflection of caffeine content. Other ingredients include the B vitamins, ginseng extract, theophylline and various herbs. The health effects of some of these additives are not well documented. These energy drinks also contain high amounts of sugar, with some of these products containing up to 20 teaspoons of sugar per 500 ml. The daily limit of added sugars recommended by the WHO is between 6 and 12 teaspoons for adults.



### The Bitter Truth

Although studies have shown that energy drinks can improve physical endurance, there is little evidence to support any effect on muscle strength or power. Likewise, these drinks may enhance alertness and reaction time, but may affect steadiness of the hands. Overconsumption of energy drinks can have serious health effects, particularly in children, teenagers and young adults. High caffeine intake among children may harm their still-developing cardiovascular and nervous systems. Mixing energy drinks with alcohol is commonly done socially. However, this has been linked to risky behavioural trends among adolescents and adults, such as binge-drinking, drinking and driving, alcohol-related injuries and/or drug use. Although people consuming energy drinks with alcohol may not be able to judge their level of intoxication, their motor co-ordination and reaction time may be impaired.

The various health concerns associated with overconsumption of energy drinks are outlined in Table 1.

.../ continued on page 22



**Table 1 Health risks associated with the overconsumption of energy drinks.**

<p><b>Cardiovascular effects</b></p> <p>Numerous studies have demonstrated an increase in heart rate and blood pressure following consumption of energy drinks, due to the high caffeine content. Caffeine can cause heart rhythm disturbances which have been seen on electrocardiograms (ECGs) (ventricular arrhythmias, ST segment elevation and QT prolongation). Cases of atrial fibrillation and myocardial infarction in teenage boys were found to be related to drinking high energy drinks.</p>
<p><b>Neurological and psychological effects</b></p> <p>Caffeine tolerance varies between individuals, but caffeine intoxication can occur when caffeine consumption exceeds 200 mg. Symptoms include anxiety, insomnia, gastrointestinal upset, muscle twitching, restlessness, and periods of inexhaustibility. In addition, excessive caffeine intake can cause acute and chronic daily headaches.</p>
<p><b>Gastrointestinal and metabolic effects</b></p> <p>Due to the high sugar content of these drinks, there is a risk for weight gain leading to overweight, obesity and type 2 diabetes in those who drink high volumes of energy drinks. Case reports of adverse liver effects have sparked concern with respect to the overconsumption of energy drinks and the risk of liver injury, although a definite link between the two has not yet been established.</p>
<p><b>Renal effects</b></p> <p>The caffeine in energy drinks has been shown to enhance diuresis. A case of increased serum creatinine (five times normal range) was reported in a patient after daily consumption of energy drinks for two to three weeks. This resolved after two days of discontinuing intake of the energy drink.</p>
<p><b>Dental effects</b></p> <p>Due to the high acidity of these beverages, a high risk of dental issues such as erosion of dental surfaces can occur in those who consume high volumes of energy drinks.</p>

The therapeutic benefits of energy drinks are yet to be established. The health risks associated with energy drinks are mainly related to their caffeine content. The risks of heavy consumption of energy drinks among young people has, to date, largely gone unaddressed and may therefore become a significant public health problem in the future. It is important for health professionals to know the associated health risks of these energy drinks and to voice their concerns about this increasing trend.

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# PARK RUN



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**Theme:** Awareness around energy drinks



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PSSA offers its members access to the essential cover at very competitive rates through the Professional Provident Society.



For further details please contact Nikita at the PSSA National Office on (012) 470-9557 or at [Nikita@pharmail.co.za](mailto:Nikita@pharmail.co.za)

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