The Golden Mortar

News from the Southern Gauteng Branch of the Pharmaceutical Society of South Africa and associated pharmaceutical sectors.

Edition 7/October 2014

Ms. Mandisa Hela addresses SAAPI AGM

When SAAPI invited me for a breakfast and to reflect on what I have been doing for over 30 years, I said OK without thinking the question through. A mammoth task indeed. The consolation is that I have reached that stage in my life where doing well is attributable to experience and doing badly is attributable to age.

There have been a number of advances in the regulatory environment that require us to pause and ask whether we have a vision, appropriate strategies and tactics to face the future with confidence. Pertinent issues include:

- The scarcity of resources which implies efficiency in everything we do,
- The complexity of emerging technologies that demand creativity in approach.
- and globalization that has made the world small and therefore makes the need for co-operation and collaboration at a global level an imperative.

Healthcare is becoming more and more patient focused and the gap between developed and developing countries requires urgent attention. We have seen the emergence of targeted technologies, companion diagnostics, emphasis on technology assessment etc. We are told for instance in oncology, that the theory of maximum dosing is being questioned. Current thinking seems to suggest the less the better, provided the correct proteins are targeted with monoclonal antibodies. This implies a move to SC instead of IV with obvious advantages in terms of affordability, patient comfort and convenience.

The International Pharmaceutical Federation (FIP) identified important factors in their vision for 2020.

- Population factors: The population and its economy will continue to grow though disparities will persist. This implies a larger pool of aging populations, possibly pockets of poverty and unequal distribution of health services in areas with growing urbanization and in rural areas.

..../continued on page 2

INDEX **PAGE**

We have seen in our own country statistics that indicate a shrinking population in rural provinces like the Eastern Cape with migration of the economically active to Gauteng and leaving the elderly and the very young. A social challenge indeed.

- Disease burden factors: The disease burden will continue to include both communicable and non-communicable diseases. Low and middle income countries will continue to experience a much higher burden of communicable diseases. HIV and AIDS, the current Ebola crisis, are classical examples in addition to the usual pneumonias, TB, infant diarrhea, etc.
- Health System Factors: Cost, access and quality care are escalating concerns the world over. This challenge is aggravated by the shortage of healthcare workers and lately shortage of certain essential medicines across the globe. In our own country, these concerns have had an influence on the current debates on Intellectual property rights, pricing policies, the NHI and many other attempts aimed at cost containment and improving quality. I always believe that the balance between access, quality and cost containment is like an isosceles triangle where the balance of equal sides and angles must always be maintained. Any over-compensation in one arm surely leads to collapse of the whole system.
- Pharmacy profession factors: Competency in a variety of areas is the key. The challenge is that we in South Africa have varying education and training processes of pharmacists and pharmaceutical scientists.
- Pharmaceutical industry and innovation factors: Social legitimacy is key. People expect value for money, transparency, and are showing greater impatience with medication errors, risks that have not been managed or adequately communicated with honesty and integrity. They question the premise on which regulatory decisions are made. Patient groups are becoming more vocal. Current trends in innovation clearly demonstrate a need for a different skills mix from the one that obtained 10 to 20 years ago. Translational issues particularly with OMICS[1], more emphasis on mathematical modeling, development alongside regulatory involvement, access to populations on the basis of Phase II data with certain commodities, are some examples of changes we are facing. The question is, as regulatory pharmacists, do we have and are we building the required competencies for these developments?
- Collaboration Factors: Partnership and collaboration opportunities exist. We have relatively new development partners funding development of neglected diseases, models of recognition of work done by others, work sharing arrangements, joint reviews e.g. EAC[2] and some SADC[3] countries etc. These cannot succeed without common standards and good review practices. We see diversification of risk in relation to development, especially with biotechnologies.

Closer to home as we know, the MCC is being re-engineered. May I take the liberty of borrowing from experiences and lessons learnt in social business process management?

Clay Shirky wrote "Process is an embedded reaction to a prior stupidity" One writer says a process is nothing more than the coding of a lesson learnt in the past, transformed by a group of experts and established as a mandatory flow. This exercise invariably looks at doing more with less resources, optimizing work flows and improving work processes of individuals and entire departments. In knowledge intensive sectors, there still remains a performance gap 9 times that of sectors centered instead on production and transactions. Regulation has both components. Between 20% and 50% of collaborative work is inefficient or entirely wasted. Lessons learnt in this environment include the following elements:

- Recover and pool the wealth of tacit knowledge locked in drawers and minds of people
- Acquire flexibility when faced with exceptions
- Respond to change
- Make collaborations measurable

How true in our own environment, although collaboration is not a panacea for every ill.

What has happened in pharmaceutical sciences over the last 50 years?

1. Change from description to mechanistic prediction
2. Targeting for specificity of action
3. Building quality into design
4. Optimizing drugs, products and dosage regimens for patients through PK/PD (Pharmacokinetic / Pharmacodynamic) modeling
5. Building quality and reproducibility into drug delivery
6. Ensuring regulation reflects scientific developments
7. Delivering better medicines including generics to patients (upward spiral)
8. New areas e.g. nanotechnology to new products has potential
9. Personalised medicines
10. Targeted medicines.

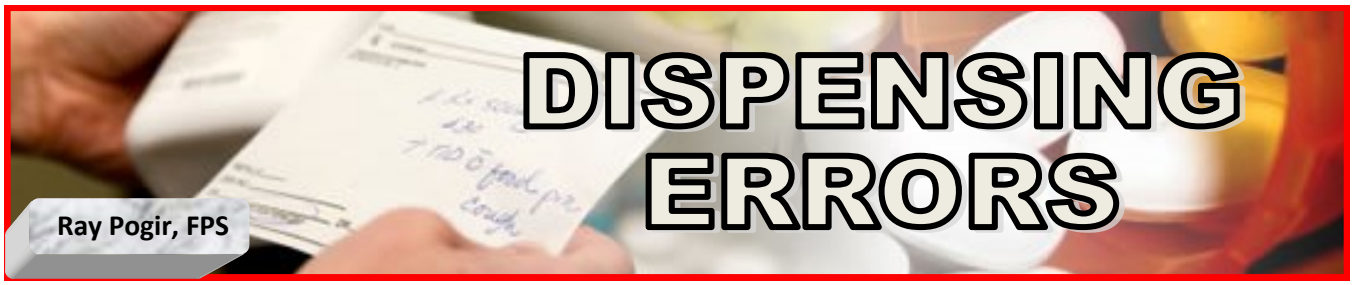
…./continued on page 3

Events that we can look forward to include:

- The introduction of the new Regulatory Authority SAHPRA (South African Health Products Regulatory Authority). The Bill is in parliament.
- The establishment of the Regulatory Science Institute is still on the agenda
- The Regulation of CAMS (Complementary and Alternative Medicines}
- Regulation of Medical Devices and IVDs (In Vitro Devices)
- Memoranda of Understanding (MOU) with selected regulators to avoid duplication of work and to support capacity building.

References

1. Wikipedia: The English- language neologism omics informally refers to a field of study ending in -biology *omics*, such as genomics, proteomics or metabolomics.
2. East African Community
3. Southern African Development Community



What must be done in the pharmacy to avoid dispensing errors?

It would be a good policy to brainstorm this problem with all staff involved in dispensing in the pharmacy, and to write an SOP of the rules to follow in order to dispense accurately.

What type of error is likely to occur? Wrong medication, wrong dose, wrong dosage form, wrong strength, wrong directions, and drug interactions, and so on.

For each of these likely errors there should be set procedures for checking. Not one quick look. Some will need to be checked a few times before being satisfied that all is correct.

Some pharmacies have devised a 5 step checking procedure to follow before the medicine is handed to the patients.

The objective is to be sure that what is finally handed to the patient is correct and will do no harm.

In the 2nd Quarter, 2014 issue of the "Pharmaciae" there are two reports of the fines and cost orders imposed by the Committee of Informal Inquiry for dispensing errors. The complaints were lodged by patients. In one case the error is alleged to have caused serious harm to the patient.

An example was recently shown to the Editorial Board of the Golden Mortar, where the labels of dispensed medicine for the adults and a child of one family were mixed and the child would have taken the adult dose if the error had not been noticed by the family.

One tablet can cause more harm than a car accident.

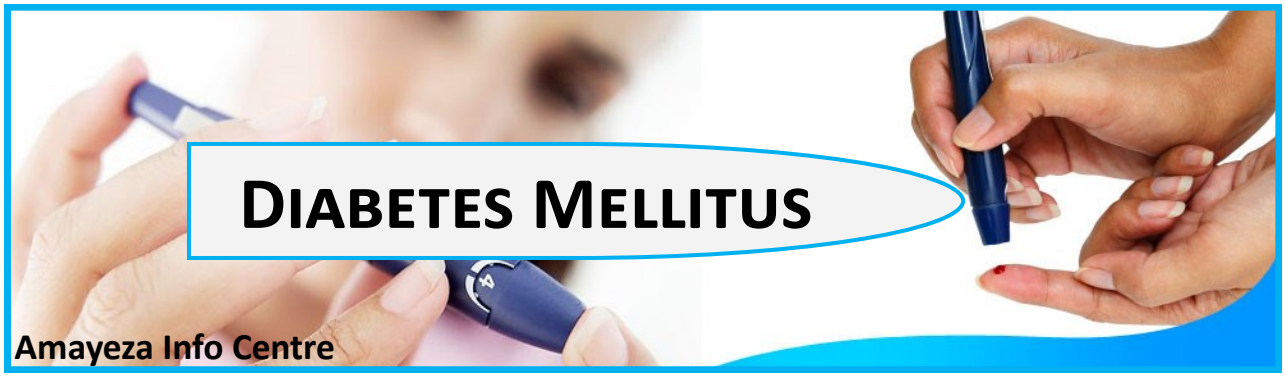
Do not let familiarity lead to a lack of professional responsibility and care.

NOMINATION AND ELECTION PROCESS 2014.

In the last edition of The Golden Mortar we reported on the nomination and election process for members to serve on the Branch Committee during 2015. This serves as a reminder of the salient points and members are asked to take note of these important dates in the process;

1. Call for nominations for members to serve on Branch Committee - 14th to 21st November 2014.
2. Voting for six of these nominees to serve on Branch Committee - 28th November to 5th December 2014.
3. Branch Annual General Meeting – Monday the 26th January 2015.

We will make available to members a short CV of each candidate to provide more information about those for whom you may wish to vote. Please take careful note of the instructions that will be sent to you via SMS prior to the nomination and election process.Please ensure that you have informed us of any changes that may have occurred in regard to your contact details, particularly your current cellphone number.



Diabetes Mellitus

Amayeza Info Centre

Diabetes Day is scheduled for 14th November, 2014. The accompanying article provides background information on Diabetes. In addition the TAG illustrated at the bottom of the article may be reproduced and printed on material supplied to patients / clients. The TAG contains information on Diabetes which the patient / client should find informative and helpful. The information may be accessed by scanning the TAG using a smart phone or tablet or similar device.

According to the International Diabetes Federation, the estimated diabetes prevalence for South Africa is 6.46% for adults aged 20-79 years (approximately 1.9 million of 30 million adults). However, about 50-85% of diabetes sufferers (especially in rural areas), remain undiagnosed. Diabetes mellitus (diabetes) is a metabolic disorder, characterised by hyperglycaemia resulting from defects in insulin secretion, insulin action or both. Deficient action of insulin on target tissues results in disturbances of carbohydrate, fat and protein metabolism.

Morbidity from diabetes is a result of both macrovascular disease (atherosclerosis) and microvascular disease (retinopathy, nephropathy, and neuropathy). Severe clinical manifestations such as ketoacidosis or non-ketotic hyperosmolar state can result in stupor, coma and, in the absence of treatment, death.

Types of diabetes

Diabetes can be divided into type 1, type 2, other specific types and gestational diabetes.

Type 1 diabetes

Type 1 diabetes accounts for only 5% of cases. It is characterised by pancreatic beta-cell destruction usually leading to absolute insulin deficiency. These patients are prone to ketoacidosis, coma and death. Ketoacidosis is often the first manifestation of the disease (particularly in children and adolescents).

Type 2 diabetes

Type 2 diabetes accounts for more than 90% of all diabetes cases and includes individuals who have insulin resistance and usually have relative (rather than absolute), insulin deficiency.

Often, characteristic symptoms such as thirst, polyuria, blurred vision and weight loss are not severe or may be absent, in the early stages of type 2 diabetes. Therefore, a significant percentage of cases remain undiagnosed. Type 2 diabetes is not a particularly well-managed disease, with fewer than 50% of patients meeting glycaemic targets, even in developed countries.

Other specific types of diabetes

Other specific types of diabetes include a wide variety of relatively uncommon conditions, primarily specific genetically defined forms of diabetes or diabetes associated with other diseases or drugs.

- Genetic defects of the β-cell function
  - ◊ *Characterised by impaired insulin secretion with minimal or no defects in insulin action.*
- Genetic defects in insulin action
  - ◊ *Abnormalities associated with mutations of the insulin receptor previously known as type A insulin resistance.*
- Diseases of the exocrine pancreas
  - ◊ *Any disease that damages the pancreas, or removal of pancreatic tissue, can result in diabetes.*
- Endocrinopathies
  - ◊ *Several hormones (e.g. growth hormone, cortisol, glucagon, and adrenaline) antagonise insulin action and excess amounts of these hormones can cause diabetes.*
- Drug- or chemical-induced diabetes
  - ◊ *Certain medicines can impair insulin secretion, increase hepatic glucose production, or resistance to the action of insulin*
- Infections
  - ◊ *Certain viruses have been associated with β-cell destruction*
- Uncommon forms of immune-mediated diabetes
  - ◊ *Associated with stiff-man syndrome and anti-insulin receptor antibodies*
- Other genetic syndromes sometimes associated with diabetes
  - ◊ *E.g. Down syndrome*

Gestational diabetes

Gestational diabetes refers to hyperglycaemia (glucose intolerance) with onset or first recognition during pregnancy. It usually develops in the second or third trimester.

…./continued on page 5

Treatment

The primary purpose in treating hyperglycaemia in patients with diabetes mellitus is to reduce blood glucose sufficiently to prevent or delay the onset or progression of several diabetes-related complications (retinopathy, nephropathy and neuropathy) as well as myocardial infarction (MI), stroke, lower-extremity amputation and end -stage renal disease.

Glycaemic control

The glycated haemoglobin (HbA_{1c}) assay is a well-standardised test for guiding therapy and predicting outcomes. HbA_{1c} is a "weighted" average of blood glucose levels during the preceding 120 days of the erythrocytes' life span.

HbA_{1c} goals should be individualised, balancing the benefits with regard to prevention and delay of complications with the risk of hypoglycaemia. Diabetic patients should aim to achieve normal or near normal glycaemia, with an HbA_{1c} goal of <7 percent.

Self-monitoring of blood glucose is essential, especially for diabetic patients using insulin.

Routine assessment

Patients with diabetes require initial and ongoing evaluation for diabetes-related complications affecting:

- Eyes
  - ◊ Diabetic patients are at increased risk for visual loss, related to refractive errors (correctable visual impairment), cataracts, glaucoma and retinopathy.
- Feet
  - ◊ Regular examination of the feet is recommended to identify problems with nail care, poorly fitting footwear resulting in barotrauma, fungal infections and callus formation; also to identify risk factors predictive of ulcers and amputation.
- Kidney function
  - ◊ Diabetic nephropathy is a frequent but potentially preventable long-term complication of diabetes.
- Coronary heart disease
  - ◊ Patients with diabetes have an increased risk for atherosclerosis due both to diabetes and to the frequent presence of comorbid conditions such as hypertension, dyslipidaemia and obesity.

Lifestyle interventions

Dietary modification, exercise, weight reduction and to stop smoking can help improve glycaemic control.

Summary

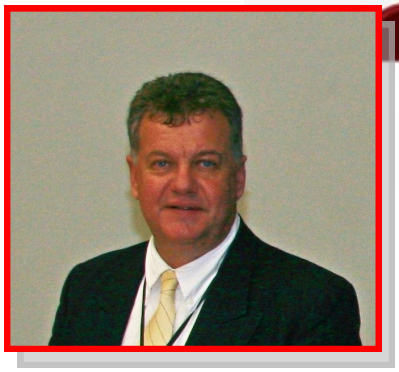
Focused screening of high-risk persons are imperative to improve the rate of early detection, thereby reducing late diagnosis of diabetic patients with established long-term complications. Good control of glycaemia, blood pressure and dyslipidaemia, together with regular examinations for microvascular and macrovascular complications, with appropriate and timely interventions, can prevent the progression of diabetes and its associated complications.

References

1. Amod a, Ascott-Evans BH, Berg GI et al. The 2012 SEMDSA Guideline for the Management of Type 2 Diabetes (Revised). Journal of Endocrinology, Metabolism and Diabetes of South Africa (JEMDSA) 2012 Volume 17 Number 2 (Supplement 1) page S1-S95 Available from: http://www.semdsa.org.za/images/2012_SEMDSA_Guideline_July_FINAL.pdf Accessed 9-10-2014
2. McCullock DK. Overview of medical care in adults with diabetes mellitus. Up-to-date [Homepage on the internet] Topic last updated Aug 04, 2014. Topic 1750 Version 33.0
3. McCullock DK. Initial management of blood glucose in adults with type 2 diabetes mellitus. Up-to-date [Homepage on the internet] Topic last updated Aug 25, 2014. Topic 1779 Version 29.0
4. McCullock DK. Classification of diabetes mellitus and genetic diabetic syndromes. Up-to-date [Homepage on the internet] Topic last updated Oct 06, 2014. Topic 1793 Version 9.0
5. Diagnosis and classification of Diabetes Mellitus. American Diabetes Association. Available from: http://care.diabetesjournals.org/content/27/suppl_1/s5.full. Accessed 10-10-2014

Use this TAG to conveniently supply information on Diabetes to your patients.

While Diabetes Health Day falls on 14/11/2014 the information available from the TAG will be relevant for future use.



The Pharmaceutical Society's Executive Director

We thought that it may be of interest to members to learn some things about Mr. Ivan Kotze´, the Society's Executive Director, that they probably would not know, so we recently conducted the following interview with him to find out a bit more about the man behind the, generally, serious professional façade. This is what he had to say to us.

GM. Hi Ivan. Thank you for agreeing to answer a few questions for us. Let's kick off with some simple ones.

GM. Where were you born? **IK.** Boksburg.

GM. Where did you attend school/university? **IK.** I went to school in Boksburg, and then attended the University of Potchefstroom.

GM. What did you want to become when you were growing up? **IK.** Something to do with chemistry.

GM. And what led to a career in pharmacy? **IK.** During my military service on the border I met a pharmacist who impressed me. I wrote to my mother and asked her to enroll me for the pharmacy course. It was as simple as that.

GM. What was your very first job/position? **IK.** After completing my internship at Western Pharmacy in Pretoria I was appointed as a Medicines Control Officer at the MCC.

GM. Can you remember your first pay cheque? **IK.** I can't remember the value of my first cheque, but I remember that the salary scale annual remuneration was R13 500.00 so I guess that the monthly amount must have been just over R1000. 00.

GM. Can you briefly describe a current, typical day at the office? **IK.** It is a mix of responding to a large number of emails, answering telephone enquiries from members on practice issues or advice. Even advising lawyers who phone to find out what the Medicines Act or Pharmacy Act requirements mean. Receiving an almost daily phone call from Gary Black (Cape Town Office) whose voice is unmistakable. I would answer "Hello Gary" and his response is always, "Hello Ivan this is Gary – just a quick question" and then the call goes on for ages because he always remembers something else to talk about. Staff issues cannot be avoided and require resolution, and currently the new premises have come with their own unique and exciting challenges, but it is always stimulating to be involved in something new.

GM. What do you think has been your greatest achievement career-wise? **IK.** I think that being elected as President of the Commonwealth Pharmacists Association for the maximum period of 4 years was probably my greatest career achievement.

GM. What do you think has been your greatest non-career achievement? **IK.** Probably achieving the rank of platoon commander (2nd Lieutenant) in the infantry at the age of eighteen when I was doing my compulsory military service.

GM. What do you enjoy most about the work that you do? **IK.** Most certainly it is the wide spectrum of different issues that present daily. I can definitely say that my work is not boring, in fact, if I elaborate on this any more, I suspect that I will be under pressure by others who might want my job. I enjoy being exposed to experts in their fields of practice during Appeal Committee meetings or legal processes and listening to investment and auditing experts at the PPS meetings I attend, for example.

GM. What is the best advice that you have ever received? **IK.** My Dad always said "remember that no one is your boss. You might have an employer, but remember that you are your own boss and that there is only one "must" in life over which we have no choice. With all the other "musts" you have a choice".

GM. What or who inspires you? **IK.** Depending on my mood or the situation, good music will always inspire most people - including myself.

GM. Can you remember a really defining moment in your life? **IK.** There were a few. Working in the gold mine when there was a rock burst. This was really scary, dusty and very noisy. Also when I was doing a patrol on the border when a landmine detonator exploded under our vehicle, but luckily did not detonate the landmine.

GM. What is your favourite thing to do on a Saturday night or over a week-end? **IK.** Braai!! of course.

GM. What is the one thing that you could not live without? **IK.** Good food – I love it.

GM. Who or what is the greatest love of your life? **IK.** My wife, my son, family, friends and of course nature.

GM. What is the most important lesson that life has taught you? **IK.** I am still trying to find that out. At this stage I think it can only be that you are responsible for yourself and that nobody owes you anything.

GM. How do you relax? **IK.** I love spending time in the bush or preparing a meal.

GM. What station is your car radio tuned to right now? **IK.** 702 Talk radio.

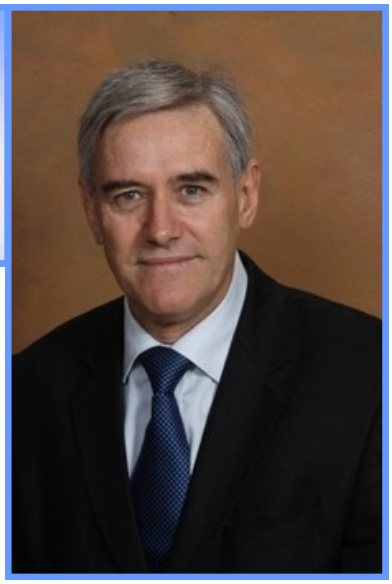
GM. If you were auditioning for "Idols" what song would you choose to sing/play? **IK.** I do *not* sing!

GM. What book are you currently reading? **IK.** Game Ranch Management by J. du P. Bothma.

GM. Why do you like living in South Africa? **IK.** Many years ago I was offered a position with the British medicines control division. My response was that I had planted some trees here and I wanted to see them grow. It must be the space, the animals and our South Africa culture. I enjoy travel, but it is always good to come back after an overseas trip.

Pharmacoepidemiology: A Science of Medicines and Patient Populations

Prof Douglas Oliver
School of Pharmacy - North-West University Potchefstroom Campus



Hippocrates, the Greek physician, sought a logic to disease and was the first person known to have examined the relationships between the occurrence of disease and environmental influences. Hippocrates developed the terms endemic (for diseases usually found in some places but not in others) and epidemic (for diseases that are seen at some times but not others).

The first known pharmacoepidemiologic studies were conducted after two tetanus outbreaks in 1901. These outbreaks in the USA resulted from contaminated diphtheria antitoxin in St. Louis, Missouri, and contaminated smallpox vaccine in Camden, New Jersey, and identified contaminated vaccine from one manufacturer as the cause. The **thalidomide tragedy** in the 1960s resulting in severe, life-threatening birth defects, was one of the darkest events in pharmaceutical research history. These events raised public concern about pharmaceutical safety, and medicine regulators across the globe continuously developed more stringent regulations and control over drug use and development.

Pharmacoepidemiology is a scientific field that borrows from both **pharmacology** and **epidemiology** and can be defined as the study of the utilization and effects of drugs. Pharmacoepidemiology applies epidemiologic approaches to studying the **use (patterns), effectiveness (efficacy), value and safety (toxicity) of pharmaceuticals in defined and large populations**.

Pharmacoepidemiological studies yield information on the risk benefit of medicine and can provide an estimate of the probability of beneficial effects on population and assess the probability of adverse effects on populations.

Epidemiology has two main components and can be defined as the **study of the distribution and determinants of diseases in populations**.

Two main approaches are followed during Epidemiological studies:

Descriptive epidemiology describes disease and/or exposure and may consist of calculating rates, e.g., incidence and prevalence. It is important to know that descriptive studies do not use control groups and can only generate hypotheses. **Drug utilization studies** would generally fall under descriptive studies.

Analytic epidemiology includes two types of studies: **observational studies,** such as case-control and cohort studies, and **experimental studies** which would **include clinical trials** such as randomised clinical trials. The analytic studies compare an exposed group with a control group and are usually designed as hypothesis testing studies.

Important to note that **Pharmacovigilance is a unique area of Pharmacoepidemiology** that focusses on the continual monitoring for adverse events and other safety-related aspects of drugs that are already on the market. In practice, pharmacovigilance refers almost exclusively to the spontaneous reporting systems which allow healthcare professionals and others such as patients to report adverse drug reactions to the medicine Regulator and the Pharmaceutical manufacturer. The safety profile of a medicine can subsequently be updated based on such reports.

The International Society for Pharmacoepidemiology (ISPE) provides a forum for the open exchange of scientific information and for the development of policy; education; and advocacy for the field of pharmacoepidemiology, including pharmacovigilance, drug utilization research, outcomes research, comparative effectiveness research, and therapeutic risk management. ISPE members represent the various scientific disciplines involved in studying drugs.

Pharmacists can clearly contribute to the body of knowledge of a medicine by actively participating in Pharmacovigilance reporting by engaging with their patients on specific therapies. The complexities of the treatments of diseases and drug utilization require the Pharmacist to be a vigilant participant in these activities as an effective healthcare provider.

INTERNATIONAL PHARMACY CONFERENCES: WHAT DO WE LEARN FROM THEM?

Jan du Toit, FPS, - Executive Director, CPS

I had the privilege of attending two international conferences recently and my sincere appreciation to the CPS of the PSSA, and Aspen Pharmacare for making it possible to attend. The first Conference was Pharmintercom (an annual meeting of the Community Pharmacy organisations' Presidents and Executive Directors of the seven English-speaking countries, i.e. South Africa, Australia, New Zealand, USA, Ireland, Canada and the UK). Secondly I attended FIP (International Pharmaceutical Federation) World Congress of Pharmacy and Pharmaceutical Sciences. The intention of this short article is not to provide detailed feedback on everything that transpired at the conferences mentioned (some things one should rather not be reported on!) but merely a 'snapshot' of some impressions gathered and, therefore mostly a personal viewpoint.

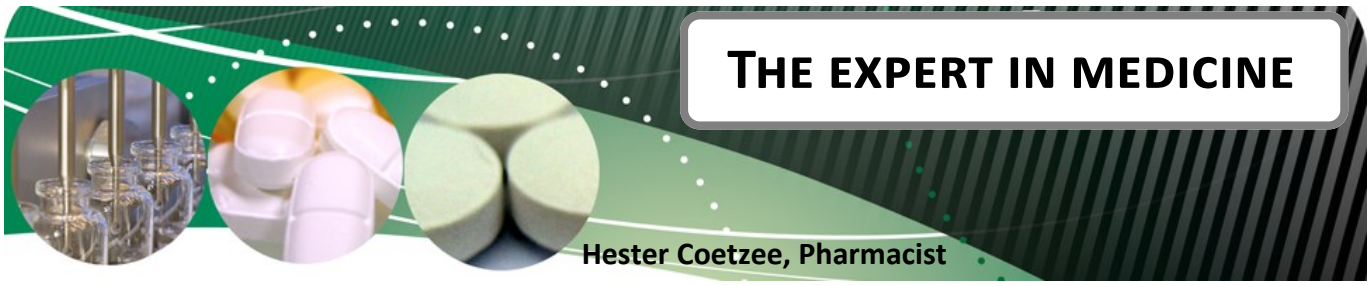
Ten years ago the buzzwords were "pharmaceutical care". The international perspective currently is that the traditional role of pharmacists as suppliers of medicine and preventing 'stock-outs' should not be neglected. However, it was also emphasised by most speakers at these Conferences that the role of being mostly a supplier of medicine alone would no longer meet the needs of communities or ensure a viable community pharmacy business.

The deliberate mind-set shift required to move from the more traditional role of pharmacists as suppliers of medicine to shaping pharmacy for the future as described by the Royal Pharmaceutical Society of Great Britain (RPSGB) in a report: "*Now or Never: Shaping pharmacy for the future*". The report emphasises that people across Britain should expect pharmacists to offer more than just medicine. It would be no different in South Africa.

Access to medicine for all the people of South Africa must therefore still be the number one priority for all pharmacists, whether working in the public or private sector. This statement should emphasise that we have learned from international conferences that the more traditional role of pharmacists as the custodians of medicine, and working together to ensure access to essential medicines, should not be neglected.

However, whilst pharmaceutical care was on everyone's lips around 2004, new models of care in community pharmacy are now the new phenomenon. A particular viewpoint of FIP depends mostly on which sessions you attended. There were many parallel sessions of even importance, but one tends to choose the ones you personally feel that you or the Association (Sector) you represent, may benefit the most. I wish to be so courageous as to say that we are at a stage where some international colleagues could learn from us, particularly relating to additional services provided in community pharmacies, such as Primary Care Drug Therapy (PCDT), clinics in pharmacies and preventative healthcare (monitoring tests), including vaccinations.

In summary, what we could learn from the attendance of international pharmacy conferences is that the responsibility of the pharmacist, as supplier of medicine, must (rapidly) move to a provider of additional services or new models of care, and of being a caregiver. But such services must be provided at a place which is convenient to the patient (read public sector patient), particularly if community pharmacists in South Africa wish to be part of the Centralised Chronic Medicine Dispensing and Distribution (CCMDD) program of the NDoH.



THE EXPERT IN MEDICINE

Hester Coetzee, Pharmacist

Unfortunately Belle, my Border Collie landed under the front wheels of my car about five weeks ago. Border Collies are used for herding livestock and were specifically bred for intelligence and obedience. But, in my experience, everyone has a flaw of some kind, and Belle is no different. She has a fear of noises. Thunder makes her crawl through to smallest hole to the 'safety' of the house, and she chases cars – trying to prevent moving vehicles from leaving our premises. I suppose she sees a moving vehicle as the herd she needs to protect? So after eight years of living with this, the inevitable happened - I drove over Belle's hind leg with my car. So, Saturday evening I had to take Belle to the Vet.

Nothing was broken, but there was not enough skin left to close the wounds on her back leg. So she was only discharged a week later, with the instruction to bring her back every second day, as cleaning and debridement of the wound was necessary as we waited for the wound to heal and fibrous tissue to form.

..../continued on page 9

What surprises me every time I take a pet to our Vet. is that one never leaves without a 'Patient Discharge Information' leaflet. This form contains the necessary client data, the date admitted, reason for visit etc., and also the care required.

The procedures, diagnosis and treatment options are explained and put down in writing. In this case the bandage change and care was explained, and I was informed to monitor Belle's leg for any signs of discomfort and swelling, and I was advised to contact the Vet. if there were any concerns.

There was also a list of all the medicine Belle was to be given, and each was explained (again in writing) how to administer it to her. For example: Previcox®: 'Half a tablet once a day, in her mouth for two days. Start tomorrow morning" and then the follow-up treatment was explained.

I can't help wondering why we do not treat our human patients in the same way that the Vet. treats our pets? Every time I am in a pharmacy, and I see someone leaving with a 'mdu label' I shiver, because in my experience, the public is dependent on us, the pharmacist, to provide them with all the necessary information on how to use their medicines safely, and to maximum effect. So they have the medicine they need, but what now?

Let us say that the patient receives Roaccutane®. Would you allow a patient to leave your pharmacy with '1 twice a day' on a label and leave it at that? Or would you regard a better label direction to state for e.g. 'Take 1 twice a day with food or milk. Use contraception (females). Use sunblock. Never share. Avoid other Vit A.'? etc.

If we consider the Vet's example, perhaps we could provide the patient with *additional printed information* such as you would find in your medicine interactions system.

- Take with food or milk. (Drug failure possible without food due to decreased absorption).
- Woman of childbearing age may not take this drug unless EFFECTIVE and UNINTERRUPTED contraception has been used 1 month prior to starting therapy and during therapy etc.
- Avoid any concurrent supplement containing any form of vitamin A. Toxicity possible.
- Avoid sun exposure, or take effective precautionary measures such as using sunblock.
- Report the development of hearing impairment.
- Report severe headache, upset stomach, vomiting, and changes in vision immediately.
- This drug can be toxic to the liver. Notify your doctor if you have a history of liver disease. *Full blood counts, fasting lipids and liver function tests should be performed
- Avoid alcohol. It potentiates the risk of developing liver toxicity.
- This drug contains a derivative of Vitamin A which may colour urine and stools.
- Use preservative-free artificial tears (eye drops) if you experience a reduction in tear secretion - ask your pharmacist.
- Monitor blood sugar.
- Monitor cholesterol.
- Report muscle pain and weakness, loss of appetite.

This obviously will take more of your time, but the question you should ask yourself is this. *Is it only the patient that is going to benefit from this or will I gain some benefit as well?*

In my opinion you will greatly enhance your professional image in the eyes of your patients which in turn results in patient loyalty – a rare and valuable commodity in this day and age.

By the way, I am still taking Belle to the Vet. for bandage changes, but fortunately it is not every second day any more, - we are now on a five day schedule!

A Midsummer Night's Dream

Jennifer Austin - Wits Pharmacy Student Council

It felt like a midsummer night's dream. For just a few hours Wits Pharmacy students exchanged their text books for sparkling clutch bags, jeans for glamorous ball gowns, and hours behind desks for high energy dance moves. The venue was transformed into the mystical wonderland of a Midsummer Night's Dream. This was the atmosphere of the fourth year Wits pharmacy ball in celebration of the nearing completion of our pharmacy degree course.

Christiaan Strydom, the class rep, brought smiles to our faces as he reminded us of the entertaining moments we've shared as a class. Our highly respected lecturer, Mr Dave Bayever, motivated us with valuable insights into what we should strive to achieve as pharmacists in the real world. We then presented some fun, light-hearted student awards such as the "Competitive Antagonist" awarded to Charity Mokoena, the "King of Selfies" awarded to Christiaan Strydom, the "Nerdy Pants" award to Firdaus Kajee and the "African-time Specialists" which was awarded to Radiyyah Ahmed and Raabia Hadjee.

This special night, filled with delicious food, memorable entertainment, photographs, music and non-stop dancing was our last chance to relax and have fun before the final push to the end of the year.

We would like to extend a huge "thank you" to the PSSA who made this event possible for us through their sponsorship. It is a memory we will cherish as we graduate and become valuable contributors to the healthcare system as we put our pharmacy training into practice.

INHALATIONS

Ray Pogir, FPS

The photographs accompanying this article are examples from the collection of various artefacts in the museum which were used to deliver steam or inhaled medication to the respiratory tract.

The earliest Inhalations were antiseptics or compounds of volatile or aromatic substances dissolved or suspended in water which was boiled so that the steam carrying the medication could be inhaled.

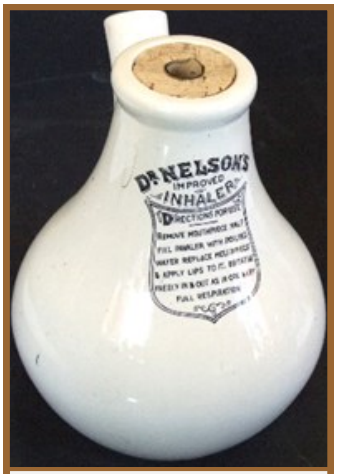
The importance of steam as a humidifier and also as a vehicle to deliver inhaled medication contained in the vapour, led to the production of steam kettles such as the example in the photograph. They were also known as “croup kettles.” The Dr. Nelson’s Improved Inhaler, in the photograph, was developed in England in about 1875 and became a popular seller.

The modern electric and electronic humidifiers have replaced the original steam kettles.

Later developments such as nebulizers allowed for the inhalation of medications such as epinephrine, in the form of micron sized particles, or fine powder inhalations such as penicillin and other powders designed to have a direct effect on the nose, sinuses, and the bronchial alveoli. Later came the metered inhalers for the delivery of medications such as the corticosteroids for the treatment of asthma.

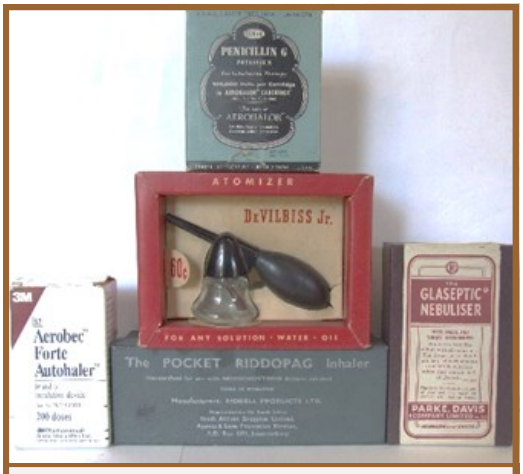
Formularies in the museum library for the use of Menthol, Camphor, Eucalyptus Oil, Benzoin and Thymol in vaporized form go back to the 1800s.

Other medications, such as Amyl Nitrite, were in glass capsules or “vitrelli” which could be broken to allow for the inhalation of the medication for other conditions such as angina.

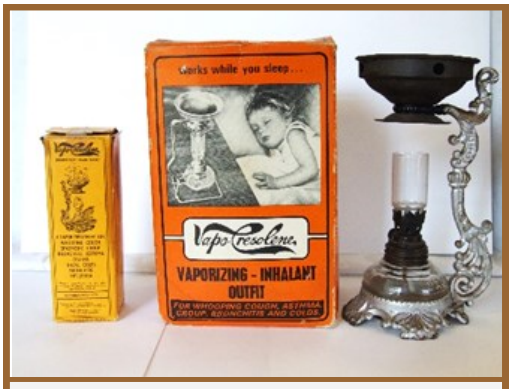


Dr Nelson’s Inhaler

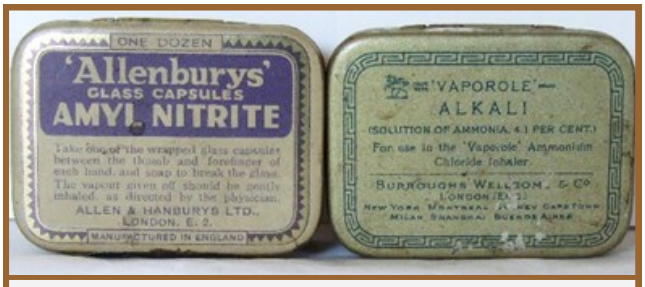
Early steam kettle



Various Inhalation systems
Penicillin G Aeroinhaler
De Vilbiss Jr Atomizer
Pocket Riddopag Inhaler
Aerobec Forte Autohaler
Glaseptic Nebulizer



Vapo Cresoline liquid and lamp



Amyl Nitrite (L) & Ammonia (R) glass capsules

NOW YOU SEE ME NOW YOU DON'T

The opportunity to purchase the property next door to the Branch Office in Glenhove Road arose in 2001. The Branch Committee considered this opportunity for investment in a positive light and decided to send Gary Kohn and Doug Gordon to attend the auction. The short version of the story is that they came away having successfully out-bid everyone and had purchased the property.

The building was rented to a number of different tenants during the following twelve years or so until the Branch was offered the chance of purchasing the subdivision of the property in question. Again the Branch Committee saw the long term possibilities of owning the adjoining properties and in 2011 the second property was purchased, vastly increasing our options for development.

In 2011 the Committee decided that, rather than attempt to develop the property on their own, it made a lot of sense to partner with a property development company with a successful track record.

The first steps in this development were, naturally enough, to demolish the existing buildings, but this turned out to be a little more complicated than one might imagine.

The first property had been declared a heritage site simply because of its age and this led to a merry chase for almost eighteen months attempting to get a demolition certificate by proving that the building was not, architecturally speaking, anything special or worthy of preservation as a heritage site. The Branch managed, with the assistance of some local experts, to prove this, and was finally granted the certificate earlier this year, that allowed the demolition of the building. The accompanying photographs create a sort of "before and after" impression of the actual demolition that took place during September this year.

Members will be kept informed, through The Golden Mortar, of how this project develops.

Before

One week later

Wits Pharmacy Student Council's Pharmacy Week

Jasmine Duxbury

During the week of the 29th of September to the 3rd of October, we hosted the Wits Pharmacy Week and started out with a "Clinical Testing Day". We set up tables in the foyer of Medical School where our 4th years got to practice their blood pressure, cholesterol, glucose and peak flow testing on willing candidates. The 4th years were preparing for their OSCEs (Objective Structured Clinical Examination) at the time so they appreciated the extra practice. While they conducted tests, the rest of us handed out pamphlets on antibiotic stewardship to people passing by.

On the Tuesday we had a visit from Roche who gave an informative presentation on their company and the routes of industry that a pharmacist can explore. Many of us found this very interesting as we don't know much about what to expect from industry, although many of us see it as a definite career path. After the presentation we handed t-shirts out to WPSC members who loved the catch phrase on the back "Educated Drug Dealers".

Angeliki Messini presented to us a talk on "Antibiotic Stewardship in the Hospital Setting" on the Wednesday. As a result of this we obtained a new outlook on antibiotic stewardship as we are often exposed to antibiotics in a retail setting. A frightening statistic that was revealed to us is that something as basic as washing of hands is not adhered to in ICUs and even between patient contacts.

On the Thursday we had hoped to visit a retirement village to share information on antibiotics, the risk of drug interactions and responsible medication usage. We felt this would have been a worthwhile project but unfortunately were unable to find a willing retirement village. And of course, to end the week we hosted the all-anticipated annual pharmacy braai. Overall it was a successful week and it's always a good feeling for Council when we can inspire interaction between fellow pharmacy students.

"If only laughter could fight bacteria – laughicillin, nothing could resist it!"

The Golden Mortar
P O Box 2467, Houghton, 2041
Tel: 011 442 3601, Fax: 011 442 3661
nevillel@pssasg.co.za

Your SG Branch Chairman	Lynette Terblanche
Your PSSA Southern Gauteng Branch Sector representatives are:	
Community Pharmacy:	Richard Barry & Tshifhiwa Rabali
Hospital Pharmacy:	Pieter van der Merwe & Bronwyn Lotz
Industrial Pharmacy:	Yolanda Peens & Walter Mbatha
Academy	Paul Danckwerts & Deanne Johnston

Contact them through the Branch Office: Tel: 011 442 3615

The Editorial Board acknowledges, with thanks, the contributions made by the CPS Southern Gauteng Branch to the production of this newsletter.

For more information on the Southern Gauteng Branch and classified advertisements visit the PSSA website on www.pssa.org.za