DR. ROGERS ATEBE
A HUMBLE DISPLAY OF LEADERSHIP
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PRESIDENT’S COMMUNIQUE

The Pharmaceutical Society of Kenya has just undergone a rigorous election period spanning the past two months. I wish to thank all of you for participating in this noble process. For the first time in PSK’s history, over 65% of PSK members participated in the voting process, compared to approximately 30% member participation in previous elections.

We now have a National Governing Council in place, and we promise to take PSK to greater heights. In our new term, our priority is to reform the pharmacy practice once and for all, through the roll-out of the Green Cross and the repeal of CAP 244. An immense effort put forth by the elected leaders will be needed to achieve this, in addition to the support of PSK members. PSK is fully engaged, as a stakeholder, with the Ministry of Health, Parliament, Senate and County Governments in policy formulation and implementation. We will work with these institutions to make sure we improve the Health Sector completely.

Lastly, as we approach the end of year, let me wish you Merry Christmas and a very Happy New Year.

A HUMBLE DISPLAY OF LEADERSHIP - DR. ROGERS ATEBE

By Dr. Nadia Butt
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I was to meet Dr. Rogers Atebe at 9am at Regal Pharmaceuticals (where he is the Company Pharmacist), the morning of October 14th, 2014. If you are familiar with Dr. Atebe, you surely learn quickly that he is an individual who takes punctuality seriously. And yes, I did make it on time, in fact I managed to be early for our meeting. After entering the reception area, I was politely greeted, and asked to wait for Dr. Atebe in meeting room 2.

Dr. Atebe joined me soon after with a smile, firm handshake and an exchange of pleasantries. We took our seats to begin the interview. Dr. Atebe began by asking about the ground rules. ‘I thought what ground rules are we talking about, I’ve come for a profile interview.’ I realized very soon that Dr. Atebe was referring to the direction of the interview.

“This is not about Rogers Atebe. It is about the pharmacy profession and Atebe only happens to be its servant at some critical point in the development of its history,” he insisted. Thus, it was decided that we will discuss those aspects of his life and career that will benefit or provide guidance and inspiration to younger Pharmacists.

Dr. Atebe was born and brought up in Kisii, Kenya. He belongs to a middle-sized family whose love and caring nature built his character, likewise is Dr. Atebe’s nuclear family.

He completed his Primary education at Riosiri (previously Kisii district), proceeded to Mirogi Boys’ Secondary School in Homa Bay County (previously South Nyanza) for his O-level education, before proceeding to Eastern province for his A-level education. He believes the transition from one place to another was an experience that shaped him, by allowing him to interact with people of different backgrounds of “multi-ethnic” origins.

Dr. Atebe, throughout his education generally remained a topper in his class and school. He was a leader from a young age, as he was often chosen to be a prefect, time keeper, librarian and so forth in school. He joined clubs like...
Wildlife Club, and Community Welfare Club and the National Science Congress Club.

It was in Kangaru School, Embu, where his excellent achievement in Sciences, Mathematics, Biology, and Chemistry served to guide him on his future career. He was quick to add that inspiration from home also pushed him towards pursuing a career in Pharmacy.

“My paternal grandfather was a herbalist and so was my grandmother. Actually, my grandfather was multi-skilled, and was also a surgeon who, to my utter consternation, performed craniotomies without using general anesthesia (GA) on his patients,” Dr. Atebe explained. He went on to acknowledge that he loathed seeing people undergo surgery without GA due to the pain the patients’ endured. His keen interest in herbs and how they helped cure ailments won him over to become a pharmacist. He recalls his grandmother, Moraa, using omobeno (Cassia didymobotrya) to relieve constipation, while youngsters like him used it for fishing in the nearby Nyansore River.

Dr. Atebe pursued a degree in Pharmacy at the University of Nairobi (UoN) from 1980 to 1985. In fact, his dissertation was entitled An Exploration of the Pharmacological Effects of Cassia didymobotrya. Inasmuch as his inspiration to study Pharmacy was from his paternal side, he believes that his conduct and behavior was acquired from his maternal side of the family.

His transformative approach to situations started manifesting early on. For example, while a third year student at the UoN, Dr. Atebe contested for and was duly elected the Vice-Chair for the Association of Medical Students University of Nairobi (AMSUN) from 1984 to 1985. The look of confusion accompanied by a question on my face prompted Dr. Atebe to explain further. Nairobi University Pharmacy Students Association (NUPSA) was the organization for Pharmacy students, whereas AMSUN was for medical students. He explained that he was a member of NUPSA, but it was the apparent rivalry between Medical and Pharmacy students that prompted him to take the unprecedented move. He was interested in integrating all students (including nursing and dental as well), and gaining better relations among the groups; he managed to accomplish this through his position in AMSUN, despite facing substantial skepticism from his own course-mates some of whom branded him a “day-dreamer” due to his “strange” aspiration.

Upon graduating in 1985, and getting registered as a pharmacist a year later, Dr. Atebe joined the Pharmaceutical Society of Kenya (PSK) as a member, a status he has maintained consistently without a break ever since.

Soon after returning to Nairobi from his public sector service as Pharmacist In-Charge at Nyamira District Hospital, Dr. Atebe sought election and was voted into the National Council as a member in 1989. It is at this time that he, under the Chairmanship of Dr. Francis Ndemo (now Professor and Fellow), along with other colleagues initiated the Professional Oath for Pharmacists and adoption of the title “Doctor.”

For those unaware of the Professional Oath, it was first administered on the 28th day of April in 1990 by the Ndemo team to which Atebe belonged; unfortunately it’s critical importance has not been well articulated thereafter. What has remained behind is the adopted title “Doctor,” which ideally should not be used without taking the professional oath which reminds us of our professional responsibility towards patients and the general public that we serve. Dr. Atebe holds the oath so dear to heart that he requests it be reproduced and circulated once again among our fraternity as a reminder of our duty.

The Medical Practitioners & Dentists Board opined against the use of the title by pharmacists, and lodged a case against PSK in this cause. They believed that the title was a right only unto them. Dr. Atebe, along with the late Dr. Joseph Gitau Mwangi (two-term PSK Chairman like Dr. Atebe) stood together in court on behalf of PSK to have the title adopted for Pharmacists.

“As you are aware, in other parts of the world, the title “Doctor” is only earned by a Pharmacist after completing a Doctor of Pharmacy (PharmD) degree. Why do you think it should be given to Bachelor of Pharmacy holders?” I asked keenly.

He explained that it was a matter of perception that Pharmacists needed to change for themselves as healthcare professionals, amongst their colleagues, and the public. “This title was necessary to re-position Pharmacists, and acknowledge their value. Pharmacists did not want to adopt the title to convert themselves into medical practitioners, but to adopt it as an honorary peer title while we retained our own profession as Pharmacists.”

After the Medical Practitioners & Dentist Board soon realized the purpose of the designation, they settled out of Court in the early 1990’s. Hence, the title “Doctor” was adopted by pharmacists in Kenya.

The decade that followed, Dr. Atebe explained, was one of the most turbulent in the history of pharmacy in Kenya. The World Bank (WB) and International Monetary Fund (IMF) had slapped Kenya with the Structural Adjustment Programs (SAPs) which resulted in the liberalization of all markets, including the pharma sector in error! At around 1993, the WB and IMF, instructed the Kenyan government that the removal of market regulation including pricing and barriers against imports was a precondition, before receiving any further foreign aid on which the country heavily depended. Crafty businessmen took advantage of this and started what later became “brief-case importation of medicines,” and also began all manner of unlawful trade in medicines, citing the SAPs as the excuse. Pharmacy practice was quickly degenerating and it demanded effort from everyone, both in public sector and the private sector to bring back order.

It was during this period that Dr. Atebe was elected the Honorary National Secretary (1995-96), and twice elected Na-
tional Chairman (1996-97, 1997-98) of PSK. In the capacity of Honorary Secretary, he played a remarkable role in the inaugural National Pharmacy Awareness Month (NPAM) in July 1995, writing various informative articles for the print media to enlighten the masses on the crucial role of pharmacists in healthcare delivery. NPAM was initially used to create a positive image for pharmacists in the minds of patients and other notable public. The title of “Doctor” was first introduced to the broader public in earnest at that time. In this month, PSK members offered free services to the public such as counseling on use of medicines that was referred to as the “brown bag event.”

“Some events are better blotted out of history,” like the challenge to moral and ethics that Dr. Atebe faced during his first term as the Chair. He had to choose between his personal friendship with some colleagues who were Pharmacy & Poisons Board (PPB) members and allegiance to his profession. He cast his lot with the profession and led his Council in meting out disciplinary action against his colleagues. He says it was one of the worst experiences he has ever had as a leader in PSK.

His second term of office as National Chairman, which came a year later, he launched the Green Cross project on September 21, 1999, in order to protect the public from quackery that had become a real threat to pharmacy practice, and to date remains. PSK through that symbol sought to guarantee all aspects of quality of products and service offered by their members. The Green Cross became the final initiative in the rebranding, repositioning and marketing strategy undertaken by PSK, spanning a decade.

Apart from his activities in employment, Dr. Atebe participated in a number of workshops and seminars representing the Federation of Kenya Pharmaceutical Manufacturers. He has participated in the East African Community Medicines Regulatory Harmonization (EAC-MRH) initiative, and the EAC Regional Pharmaceutical Manufacturing Plan of Action (EAC-RPMPOA), Kenya Association of Manufacturers and Kenya Healthcare Federation.

As the Chairman of the Industrial Pharmacy sector, Dr. Atebe along with his team lobbied the UoN School of Pharmacy for an opportunity for industrial pharmacists to gain formal qualification in Industrial Pharmacy at the institution. It was indeed a point of convergence for Dean Prof Grace Thoithi with her team and Health Sciences College Principal Prof Isaac Kibwage. The quest for part-time studies for pharmacists in full-time employment is yet to be fully realized.

He also led his team to introduce Continuing Professional Development articles that were specific to industrial pharmacy practice.

Dr. Atebe has remained an integral part of PSK to date in many capacities, including that of the Editor in Chief of the Pharmaceutical Journal of Kenya from 1998 to 2001. He admitted that he loves to write because it is a way to disseminate information to others.

Dr. Atebe also participated in the Steering Committee that created Kenya Medical Supplies Agency (KEMSA) in the run-down to year 2000, when he was sent in a benchmarking mission to the Medical Stores Department (MSD), Tanzania. He was later appointed as a non-executive member of the KEMSA Board where he served from 2006 to 2008 (Gazette Notice 743 dated 18th January 2007).

Throughout his career that spans about 30 years, you will find the experiences of a teacher, pharmaceutical marketer, quality assurance manager, head of factory, general manager and leader in one person.

Among his most notable accomplishments in employment was when he was headhunted to become the start-up General Manager (2004-07) of a collapsed pharmaceutical manufacturing firm that, working together with the investors (also from healthcare professions), he managed to restart its operations permitting the company to grow into a vibrant business enterprise. It was while in this position that he was appointed to serve on the KEMSA Board.

In 2007, he was recognized in the 50th anniversary celebrations in PSK and awarded for his leadership roles in the Society.
More recently Dr. Atebe was named a member of the Inaugural Elections Board under the 2014 PSK Constitution, where he was Deputy Chair.

At community level, Dr. Atebe is a member of the Kisii County Healthcare Professional Steering Committee working on a number of initiatives aimed at improving healthcare in the region.

Dr. Atebe believes in an all-round holistic person with presence in the professional, mental, physical and spiritual realms. On the spiritual sphere he is an ordained Elder of the Seventh-day Adventist Church, an invested “Master Guide,” playing an important role in spiritual nurture and mentorship of youth and members of the church.

He is the Evangelism and Personal Ministries leader at the Nairobi Central SDA Church and currently gives others inspiration on moral lifestyles. Elder Atebe considers this ability of inspirational empowerment of others as one of his greatest gifts from the Supreme Creator of the Universe applied in his life.

Dr. Nelly Kimani has often referred to Dr. Atebe as one of her mentors, in our conversations. She has a great deal of respect for him, and vouches that whenever she has needed guidance, he has been there for her. With humility he said, “Hearing this makes me kneel down to thank the Almighty God. If someone benefits from me in any way, it is God’s glory that has given me benevolence and humility to touch others.”

“Dr. Atebe, looking at the current PSK, do you see it advancing and what would you like to see happening in the next 3 years?” I asked.

“We the older pharmacists must age gracefully by supporting the new crop of leaders in the profession,” he asserted. He expressed his contentment with the current forward mobility. He further described progression in leadership as ‘passing on the baton,’ such that there is overlap from where one ends their journey in office, to where another begins their journey. And, it is this progression that creates a worthy heritage for coming generations he explained.

There are five developments that he identified as advancements in PSK today, in addition to what he hopes to see in the near future.

1. PSK is heading towards financial empowerment of its members that will provide the all-round development of the pharmacist.

2. PSK is heading towards owning property, and erecting a building that will house PSK and its operations.

3. The PSK Constitution has embraced devolution in its entirety making pharmacy practice relevant to Kenya’s Constitution 2010.

4. PSK has remembered the Green Cross initiative taken 15 years ago and revived it to take it to new heights.

5. PSK should re-engineer the 20 year old National Pharmacy Awareness Month and use it as a marketing strategy for the pharmacy profession in the digital age.

Before ending our meeting, I asked Dr. Atebe to provide any advice to young inexperienced pharmacists, like myself. With humbleness he replied, “Remember to define your goal and move forward to achieve it; but as you go, remember to bless your mother and your father, both biological and in the profession.”

Dr. Atebe has certainly made an impact and will leave a legacy behind for generations to come. He has displayed leadership qualities from a very young age and continued to lead and mentor people throughout his life.

Thank you, Daktari for inspiring others by sharing your experiences with us all.
Pharmacists in Kenya have mourned the infiltration of the profession by quacks for many years. It has been said that, due to lack of professionalism and the presence of huge numbers of technologists, community pharmacy practice will soon be the smallest sector of pharmacy practice. Currently, there are sixty or so pharmacists resident in Mombasa County, of which only six practise in community pharmacy. Pharmacists have a duty to safeguard community practice, after all it offers the greatest degree of professional autonomy and unlimited opportunity for innovation.

In PSK, there are 2 very pressing issues that require our attention. Two important things are happening in Kenya today: both the new PSK Constitution and a proposed new Act of parliament to regulate pharmacy practice. Both are expected to breathe new life into pharmacy practice. The Constitution devolves the responsibility for solving problems and for setting the professional agenda to 5 Standing Committees, 9 Branches and 4 Sectoral Divisions. Solutions to our problems must therefore come from within the PSK. The Pharmacy Practice Bill 2014 has several positive features; the most striking feature is the provisions for recognition of pharmacy consultants and endorsement of the undefined Pharmacist Initiated Therapy (PIT) as a legitimate offering from a Pharmacist. This Bill, when enacted into law, would usher in a new era for pharmacy in Kenya. There are few countries in the world that have laws recognising pharmacy consultants; and Uganda is the only country that currently has legislation that endorses PIT.

The great promises of both the new Constitution and the Proposed Pharmacy Practice Act will not be realised unless pharmacists are willing to change. There is a price to pay. The paradigm shift advocated here, must include five things:

1. Abolition of free pharmacy services
   i) The consultation fee is an important element of a professional contract. Failure to charge diminishes the professional responsibility of the pharmacist to his clients.
   ii) Free services are likely to be perceived to be of inferior quality. Thus, counselling may be ignored leading to poor health outcomes.
   iii) Offering free services is tantamount to undercutting other health professionals, who charge for similar services.
   iv) Accepting free advice puts the client under pressure to purchase the product from a Pharmacy, and undermines the right of the client to choose their service provider. This is the basis upon which many jurisdictions discourage the dispensing and sale of medicines by physicians.
   v) A pharmacist who relies, solely or predominantly, on the sale of products to earn his living cannot be an objective provider of advice on the same. This advice informs the common belief that dispensing pharmacists should refrain from prescribing.

Implementing the foregoing recommendations would restore trust in pharmacists, strengthen pharmacist-patient relationships, improve patient outcomes, optimise the use of phar-
macist skills, and result in greater professional satisfaction.

2. Professional approach to the patient

If pharmacists want to be taken seriously as providers of health care services, they must shed their merchant image. It would be nice to see the public visiting local pharmacies rather than roadside shops to buy medicines.

With this dream in mind, important changes need to be enacted and should include the following:

Stop Over-the-Counter consultations.
Isn’t it disturbing that a decade after ratifying the Code of Ethics and Standards, pharmacists still do not have consultation rooms?
Documentation of services.

All pharmacists who offer direct patient services should clearly document those services, as a matter of accountability. On the same note, pharmacists should attempt to register their clients and create Patient Medication Records (PMRs) for prospective Medication Treatment Management.

Use of personal names rather than business names.
It is clear that even in the practice of medicine and law, our reference groups, practitioners are known to their clients by name and qualification.

Practice site should be identified rather than business premises.
The description of pharmacy practice as a place where medicines are sold (often referred to as Duka La Dawa) only serves to demean the profession and does not help the consumer to identify pharmacy service providers.

Lay out of practice site must reflect the services proposed.
We need to seriously re-think how to display pharmaceutical products. Is it ethical to induce people to buy medicines? Is it ethical to encourage patients to stock up medicines? In 1952, a Virginia pharmacist, Eugene V. White, figured that it was possible to run a pharmacy without displaying the products; this was the earliest attempt by pharmacists to offer cognitive services. The nascent PSK Green Cross initiative, being rolled out currently, should be geared toward this transformation.

These changes, if implemented, would attract media and lead to animated national debates on the role of pharmacists. Government and policy makers would find it easier to engage pharmacists in national public health activities and programmes. Such partnerships would build the credibility and legitimacy of pharmacists and their role in health.

After implementing all of the above, pharmacists may have the courage to think of locating their practices in places other than shopping malls, the Central Business Districts, Supermarkets, and Fuel Pump stations. It is peculiar that all of these business locations have little to do with the community.

3. New financing models

If we can agree that pharmacy is not a business but a professional practice, then something must be done to make it work.

First, we need to do away with blanket mark-ups that oversimplify our role. In exchange, we should introduce a Pharmacists’ Tariff to ensure pharmacists are rewarded for the exact value they add to the patient when dispensing a product.

Secondly, the cost of medicines must be controlled by law.
Thirdly, pharmacists must relocate from the ground floor and the malls where the costs of rent and service charges are so high: partnerships would be required between the pharmacy fraternity and the Government so that private pharmacists may offer ‘amenity’ services in hospitals and other public facilities.

Fourthly, PSK and other pharmacy bodies should be able to tap into state-funded Universal Health Care programmes for pharmacists.

Lastly, pharmacists must train to offer services that extend their role.

4. Rule of Law

All of these proposals require support by an ethical environment and quack-free practice environment. Both the PSK and the Board have a role to play in this. The new Constitution of the PSK creates a Standing Committee for Ethics, while the proposed Pharmacy Practice Act has provisions for an all-powerful Ethics Committee. A commitment amongst pharmacists and pharmaceutical technologists to professional discipline is an essential component of the envisaged transformation.

5. Part-time practice
Initially, it may not be possible to earn a living entirely from the sale of services rather than products. This would mean that only the most committed of pharmacists may succeed in this new journey. However, this model creates an obligation on pharmacists to be physically present when services are offered. Pharmacists can form partnerships that would allow them to spend a few hours in the pharmacy while maintaining a regular job or even business (non-pharmaceutical) elsewhere. This should be a good incentive for the hundreds of pharmacists attached to public hospitals all over the country. We would, therefore, need to undertake regulatory reforms to facilitate this.

Community pharmacy is still the face of the profession world over. The challenges facing community pharmacy practice, in Kenya, can be tackled through a paradigm shift to re-engineer the profession through a process aimed at decommercialisation of pharmacy operations. The new PSK Constitution, the Green Cross Initiative and the Proposed Pharmacy Practice Act provide an unprecedented impetus for change in pharmacy practice.

COMMUNICATION FROM PPB

Warning from PPB to Absenteeism by Superintendent Pharmacists and Pharmaceutical Technologists

Great efforts have been made to chase down unqualified persons (i.e., quacks) operating Pharmacies. However, their strategies have undergone metamorphosis; today they rent enrolled and registered practitioners licences for a fee, and employ unqualified personnel to superintend. This makes PPB’s work difficult with the current laws. PSK is working to overhaul CAP 244.

All premises registered by a pharmacist must have qualified personnel at all times, to superintend the practice. Contravening this will lead to the following:

1. Summoning of the Superintendent Pharmacist for Disciplinary action by the PPB Ethics and Disciplinary Committee (EDC)
2. Actions will include either or a combination of the following:
   a. Suspension of the licence of the pharmacist
   b. De-registration of the pharmacist
   c. Making public the action taken by the PPB against the pharmacist

PPB Inspection: What you need to know

PPB has reviewed its Inspectorates Policy of Inspection and is now receiving guidance by a professional advisor on compliance to the law.

The PPB has requested PSK to communicate information regarding inspection to its members.

On Inspection:

1. Inspectors shall always identify themselves.
2. Not less than 2 Inspectors will appear for inspection.
3. Inspectors will always present PPB inspection forms in triplicate, leaving you with a white copy. One copy will be retained by the PPB regional office, while the other will be retained by PPB central office.
4. Inspectors will advise the superintendent pharmacist on compliance issues and document the action to be taken.
5. Pharmacists should open up a file for inspection reports.
6. To avoid unnecessary inconveniences, if an inspection was conducted within 3 months of the current visit, pharmacist should provide the last report to the inspector in order to be exempt from the current inspection.
7. Follow up visits may be carried out to validate compliance of recommended actions.
8. The inspection form carries an email address that is anonymous and shall read dirinsp@pharmacyboardkenya.org.
9. Pharmacists should report any incidences of malpractice or identify unqualified persons (i.e., quacks) to the email mentioned in (8) above.

It is Illegal and Unethical to Wholesale and Retail within the same Premises

Kindly note that the PPB has issued the following warning:

Pharmacists found retailing under a wholesale license will be summoned to the PPB Ethics and Disciplinary Committee (EDC), who will ensue strict disciplinary action against them.
Kindly apply for SEPARATE licenses when renewing your license this year. PPB will issue SEPARATE licenses from this year forward. The superintendent will remain responsible to handle any queries the PPB may present to them at all times.

PPB Licencing Online

PPB will be going online with license renewal for 2015 licences beginning November 1st, 2014.

One of the requirements for application will be proof of membership of professional body in the year of application. You are therefore requested (especially for members paying at the branches) to email info@psk.or.ke the payment receipt for your PSK membership for verification two working days before making your application to PPB. This will allow PSK to input the data and relay it to PPB in good time.

Our target is to make this real-time by the year 2016.

COMBATING ANTIMICROBIAL RESISTANCE

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Antimicrobial resistance is not a future threat looming in the horizon. It is here and now, and the consequences are devastating. These were the opening remarks made by Dr. Margaret Chan, Director General of the World Health Organization, during the ministerial meeting on antimicrobial resistance in June 2014.

The discovery of antibiotics in the early 20th century transformed medicine tremendously, allowing advanced surgical procedures to be performed, and improving cancer chemotherapy while decreasing chances of infection. Antibiotics save millions of lives each year around the world; unfortunately, these miracle medicines are losing their effectiveness.

Over the years, bacteria which cause common infections have developed resistance to old and new antibiotics in the market, and have evolved to become a global health threat. Antibacterial resistance (ABR) develops when bacteria no longer respond to a drug which it was originally susceptible to. This means that recommended or standard treatments are no longer effective, and infections become harder to treat and there is a great risk of spreading infection. Multi-drug-resistant infections become more common, difficult and expensive to control. With a decline in the development and availability of new antibiotics, the need to stop this growing global crisis is increasingly urgent.

ABR is so serious that it threatens to reverse the achievements made by modern medicines and gains made in the public health arena, especially in the fight against tuberculosis, HIV/AIDS and malaria. In the absence of antibiotics, many people will be compromised.

Developing countries, whose burden of infectious diseases is high, face particular challenges including widespread availability of antibiotics without prescriptions, counterfeit products of dubious quality, inadequate hygiene practices, poor water quality, and poor waste management.

The matter of antibacterial resistance and infections due to them is a global issue whereby resistant bacteria spread silently across the world emerging months or years later. Managing this problem cannot be undertaken by any single country or sector but needs to be addressed on a global scale.

For millennia, long before humans inhabited the earth’s surface, bacteria have been performing crucial biological activities in diverse ecological systems. Humankind discovered the beneficial role which bacteria play in many natural processes.

A small proportion of bacterial species can cause disease, and some prove to be infectious having devastating impacts on human and animal health. The activities of antibiotic compounds, many of which are derived from nature, have been used to fight bacterial infections for centuries. Despite human efforts to manipulate nature, our unintended consequences on ecological processes in the natural environment have eventually influenced human health outcomes. Development of antibiotic resistance by pathogens is a good example of health issues in which understanding the central role of the environment is crucial to managing this potential risk.

Why does the Environment Matter?

Ecosystems describe communities of living organisms and their relationship to the non-living environmental condition in which they reside.

Just as humans must adapt to environmental changes, the survival of healthy populations of bacteria depends on their ability to respond quickly to overcome environmental threats. When human activities increase in the environment and the effects of exposure to ecological systems change, the development of resistance to these represents one of the most striking illustrations of Darwinian theory of selection.
and “survival for the fittest.” Resistance is a survival mechanism for bacteria; antibacterial resistance is not confined to the human body, or hospitals, clinics and farms. Antibacterial resistance may occur whenever there is presence of antibiotics. Antibacterial resistance knows no boundaries. Drug-resistant microbes of all kinds move freely among people and animals from one country to another—without notice. The movement of antibiotic resistant strains has undoubtedly accelerated by international travel and trade. International trade of food and livestock pose a particular challenge. Food produce, meat, processed foods can all carry antibiotic resistant microorganisms. Resistance can also move across borders via animal vectors (wild animals, rodents, birds, and insects) and movement of water in rivers and oceans through contaminated effluent.

In addition to the ecological systems, poverty poses a significant risk in accelerating the emergence of ABR. More often than not, the poor obtain their medicines through less secure supply chains and are therefore exposed to substandard drugs. Alternatively, high-quality medicines reaching low income individuals are likely to be inappropriately stored en route to or in the hands of patients compromising health outcomes. Thus among low-income patients, the potential for inappropriate use or for intentional or unintentional misuse of antimicrobials is high, predisposing populations to increased chances of resistance.

Antimicrobials are in high demand in countries with high infectious disease burdens. Systems and channels for proper distribution are a challenge especially in low-income countries, which are least able to regulate drug distribution and drug quality. The responsibility of ensuring that appropriate medicines are dispensed to patients lies primarily with government. Quality assurance begins with licensing and monitoring manufacturers and importers, and continues up to the point of consumption by the end user. In less affluent countries, it is difficult to avoid compromise at any or all of these stages. These systems may contribute to antibacterial resistance if not properly monitored.

**What can we do?**

Worldwide policies tailored for local conditions must be developed and implemented. Programmes and policies geared at strengthening surveillance of antibiotic resistant infections and encouraging the development of new treatments for infections will be necessary.

At a global level, ABR does not attract the level of political commitment that is required to ensure that measures available to reduce unnecessary use are put into practice. For ABR to be effectively contained, political leadership is critical. The WHO recognizes antimicrobial resistance as a global public health crisis and considers it both a medical and economic problem whose consequences are felt worldwide, especially in lower income countries whose burden of infectious disease is greater; availability, accessibility and affordability of medicines is generally more limited in these countries. Governments need to fully support the endorsement of a global action plan for antimicrobial resistance urgently. Policymakers in government need to place ABR on the political agenda. There is a dire need for development of a legal framework and strategies to implement and combat ABR and its public health consequences.

The strategies include but not limited to:

1. Increased political awareness, engagement and leadership in accelerating efforts to secure access to effective antimicrobials.

2. Development and implementation of ABR policies to reduce the emergence and spread of antibiotic resistant bacteria

3. Establishment of an inter-sectoral task force with leading governmental and non-governmental experts developing and overseeing the implementation of national Strategic Plans and Action Plans to combat ABR.

Mobilization of human and financial resources to support the development and implementation of National plans through regular specific budgetary allocation, and mainstreaming of antibacterial resistance activities within priority health initiatives.

It will take concerted efforts supported by political goodwill and government commitment to promote the judicious use of antibiotics in human and animal medicine, and agriculture. It is imperative that surveillance of antibiotic use and the incidence of antimicrobial resistance is carried out. Public awareness campaigns need to be launched nationwide on ABR.

The footprint of antibiotics within the ecological system must be minimized to ensure that the drugs that we use in human and veterinary medicine remain effective for as long as possible.

**Acknowledgement**

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**BIBLIOGRAPHY**


**BRANCH UPDATES**

**COAST BRANCH**

By Dr. Mutaza Mohamedali – Chairman PSK Coast murtaza@shifachem.com

Coast branch has been super active throughout the year. The year began with the election of new branch officials in October 2013. During the 2013-2014 PSK financial year, coast branch managed to roll out a number of awareness activities and fun filled events. Under the strong leadership of the Coast Branch Council TEAM, and the Captainship of Dr. Murtaza, Coast Branch conducted the following activities:

**General/CPD Meetings**

Members were encouraged to participate in the affairs of the society, as well as interact and network with fellow members operating in Coast Counties. Members were also oriented on the newly revised PPB/PSK CPD guidelines.

**CPD articles**

Articles designs were revamped by the head of the CPD committee, Dr Yaakub A. Sheikh, and a record number of members participated in the CPD activity. The articles covered a wide range of topics ranging from Case Studies, Short Answers and Multiple/Single Choice Answer Questions.

**Awareness activities**

The awareness committee comprises of members from various sectors including community, academia, public and private hospital. Awareness activities held during the year included radio talks, public awareness events and branding activities (ex. T-shirts, mugs, lab-coats, fliers, posters and banners were printed with the branch’s logo and were sold to members).

Pharmacy Awareness Day in Mvita, was graced by constituency member of parliament, Hon. Abdulswamad Shariff Nassir. Members also participated in the World Health Calendar Events. This included the Tuberculosis Awareness Day, held at Port Reitz hospital, which was attended by dignitaries including the Minister for Health, His Excellency, the Governor Hon. Hassan Ali Joho and U.S Ambassador Mr. Godeck. Members participated in the Blood Donation Walk in conjunction with the County executive for the department of Health, Hon. Binty Omar, and her county health team.

**Humanitarian Relief and Community Service**

Several medical camps were held during this year in Lunga lunga, Shimoni village in South coast and Mvita (Mombasa CBD). Members got to network with the area leadership and offered their services to the locals in the area.

**Green Cross Accreditation Training**

Two council members were selected and invited to Nairobi to attend Green Cross Inspectors training workshop, which included a practicum at the PSK President’s community pharmacy at Kileleshwa.

**Education Materials Distribution to members**

Members received copies of electronic reference materials, such as the various latest Ministry of Health Policy Guidelines, as well as the updated copies of the BNF and Martin-dale and other Pharmacy Reference Books.

**Pharmacy awards**

Memorabilia mugs and certificates were issued to the best performing pharmacists in the branch by the CPD committee. The event was graced by the National Executive Council members including our PSK President, Dr Paul Mwaniki.

Engaging county executive to waive single business permit / licensing: The coast council met the county executives for health and discussed issues of waiver of the single business permits for its members due to double taxation at the national and county level. The issue was taken up and discussed.
at the County Cabinet Meeting and directive was issued to waive the permits for all members who were licensed by the PPB offices. The council also presented a dossier to the Mvita MP to amend the Pharmacy Practice Bill 2014 which will be coming up for debate at the floor of the National Assembly very soon.

PSK Annual Scientific Conference

Members were proud to host the event in our county for the umpteenth time, which was attended by a record number of 360 members from various branches in the country.

Future plans of the branch involve installing drug disposal bins at various strategic places in the county, PSK football tournaments, arranging a food bazaar and Swimming Gala to raise awareness of the Role of Pharmacists. We look forward for a fruitful year.

WESTERN BRANCH

By Dr. Ongwae Peter – Chairman PSK Western

hillpharma2003@yahoo.com

Western branch includes the following Counties: Bungoma, Busia, Kakamega and Vihiga. Membership is comprised of Pharmacists both in Private sector Community practice and Public sector hospitals and County Offices.

The main highlight of Year 2014 was the branch election held on the 27th of April, 2014 at Kakamega Friends Hotel. The following Pharmacists were duly elected to various positions.

Branch Officials:

Chairman - Dr. Peter S. Ongwae
Vice Chairman - Dr. Jamila Salim
Secretary - Dr. Enock Ndombi
Treasurer - Dr. Carolyne Naliaka

Ordinary Members to the NGC:

Dr. Christopher Netia
Dr. Eric Sikuku
Dr. Ronak
Dr. Gabriel Muko

Activities carried out in 2014 included the following:

Council meetings - 6
ICME - 6
Medical Camp - 5

Participation in skip a meal campaign to buy sanitary towels where the branch contributed KShs. 15,000. These sanitary towels were donated to needy school girls. The campaign was spearheaded by county 1st Lady Mrs Lusaka and coordinated by Dr. J. Salim (PSK Western branch vice chairperson).

In addition, the branch established an interim Secretariat, which is managed by Emily Barasa.

The Branch intends to roll out the Green Cross to it’s members, to ensure that all pharmacists uphold the professional code of ethics and implements professional practice standards.

NAIROBI BRANCH

Dr. Louis S. Machogu - Founder & MD at Haltons Pharmacy
email: louis@haltons.co.ke

The Interim Nairobi Branch office was formed after the interim National Governing Council (NGC) commissioned the process in its inaugural meeting that also set up the Election board 2014. In the July 2014 General Meeting in KICC, interim officials were selected.

The interim Nairobi branch officials held their first meeting on Oct 10th 2014. Here are highlights from that meeting.

Branch officials and Roles they will play:

1. Dr. Louis Machogu – Chairperson
2. Dr. Lucy Muturi – V. Chairperson & lead on Resource Mobilisation
3. Dr. Juliet Konje – Secretary
4. Dr. David Wata – Treasurer
5. Dr. Birichi Rugendo – Ordinary Council Member & lead on Hospital Pharmacy & CPD matters
6. Dr. Eunice Gathitu – Ordinary Council Member & lead on Public Sector matters
7. Dr. Sara Agak – Ordinary Council Member & lead on Hospital Pharmacy & CPD matters
8. Dr. Andrew Okiko – Ordinary Council Member & lead on Hospital Pharmacy & CPD matters
**TOR of the Interim Nairobi Branch Officials:**
Set up sustainable instruments of office for the Branch.
Verify the membership list of Nairobi Branch.
Increase active participation by members in Nairobi branch activities.
Set up the new constitution of the Nairobi Branch.

**Call for action from members:**
The Nairobi branch calls on all members interested in participating in the standing committees to apply to nairobi@psk.or.ke.
The standing committees are:
Education/CPD
PR & Social
Investment
Legal and Ethics
Adhoc Committees: Green Cross

All community Pharmacy members renewing membership for 2014-15, kindly be reminded to apply for Green Cross, and benefit from the brand awareness campaign.

From January 2015, the month CPD activities will be run by the Nairobi Branch. **All PSK members are instructed to create their profile in the new and revamped PSK website www.psk.or.ke**, as this will ease administration and make CPD convenient for you.

All PSK members to renew their PSK membership.

All practicing pharmacists including Public Sector pharmacist to renew their annual PPB practice licence.

All calls for action are geared towards pharmacists offering the highest level of healthcare to patients, and to comply with the standards set out in the Kenyan Constitution and Vision 2030.
ELECTIONS RESULTS

Following the PSK Constitution, Elections were carried out under Schedule IV Rule 12. The results thereof were declared on 1st October 2014.

The following persons were declared duly elected in the various offices as shown:

1. President: Dr. Paul Mwaniki
2. Deputy President: Dr. Nelly Kimani
3. Honorary Treasurer: Dr. Michael Kabiru

The results from Tallying were as follows:

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The following persons are duly elected as Ordinary Members to the National Governing Council:

1. Representing Nairobi Branch:
   a. Dr. Michah Onenga Anyona
   b. Dr. Peter N. Kariuki
   c. Dr. Edwin W Barasa
   d. Dr. Louis Machogu
   e. Dr. Dick Odhiambo
   f. Dr. Sarah Agak
   g. Dr. Juliet Konje
   h. Dr. Liah Njenga
   i. Dr. Lucy Njogu
   j. Dr. Esther Karimi
   k. Dr. Francis Mwaniki
   l. Dr. David Wata
   m. Dr. George Mugi Murithi
2. Representing Coast Branch:
   a. Dr. Yaakub A Sheikh
   b. Dr. Meera M Shah
3. Representing Lower Eastern Branch:
   Dr. Francis Maina
4. Representing North Rift Branch:
   a. Dr. Mercy Nabwire Ouma
5. Representing South Rift:
   a. Dr. Mary Sang
6. Representing Western Branch:
   a. Dr. Tom Sindani
7. Representing Nyanza Branch:
   a. Dr Angeline N Achoka
   b. Dr. Daniel Birundu
I wish to thank all PSK members for voting us back into office and for your confidence in the ‘Pharmacists for Progress Agenda.’

My desire to be a part of the transformative pharmacy narrative started early, while still a student at the University of Nairobi, School of Pharmacy. I was an active member of the Nairobi University Pharmacy Student’s Association (NUPSA). In my final years, I was chosen as the class representative and selected Editor of the NUPHARMA journal, the official magazine for Pharmacy students.

After graduating, I became an active member in the Pharmaceutical Society of Kenya (PSK), where I was mentored by senior pharmacists. They helped me understand the main issues that the pharmacy profession was facing i.e., issues pertaining to legislation, policy, finances and welfare.

In 2007-2010, I was elected as the Honorary Secretary of PSK’s Central Rift Branch. This was during a tumultuous time, when our profession was facing great challenges. As a branch, we set out to identify the weaknesses that afflicted us and how to overcome them. These were identified as: poor financial base at the branch, poor attendance of meetings, the overwhelming practice by ‘quacks,’ low professional standards, and lack of coordination/involvement by the National office.

In Central Rift, we laid a sound financial base by starting a Savings and Credit Cooperative Society (SACCO) under the name Pharmaco SACCO which continues to thrive to this day. This liberated the branch from dependence on sponsorships and subscriptions to finance its activities.

It is the experience I gained by addressing these problems at the branch, which brought me to the National office, where I was first elected National Treasurer in 2011.
PSK investment committee adopted a similar model of pooling funds, in forming PSOK Holdings Limited. At the time, other Professional bodies were progressing on projects independently, while PSK was dependent on donations and sponsorships for their activities. The ultimate goal of PSOK was to attain a fully owned premise for PSK. Previously, PSK had been investing in mutual funds. The gains made from these mutual funds were ‘wiped out,’ during the global financial crisis. Thus, an alternative investment policy had to be sought. PSOK, with the help of consultants, began a real estate project in Kiambu to accumulate funds.

PSOK recently purchased property at Kajiado, where members have participated in purchasing in huge numbers. This project is named ‘Olkani Gardens;’ Olkani means medicine in Maasai language.

I wish to thank the PSK Investment Committee and the PSOK board for their steadfast resolve to see this issue through with success.

As more and more pharmacists began to work outside Nairobi, it became imperative that we empower branches. As the council member in charge of the Legal and Ethics Committee, and given my background as Branch secretary, I ensured that at least 40% of National revenues were devolved to ‘mashinani,’ in order to propel activities at the branches. As a council, we spearheaded the creation of Nairobi branch, and the National Governing Council (NGC), in order to ensure inclusivity of our decision making. The creation of the NGC, in essence brings together all branches, committees and sectorial divisions to one table. The constitution was accepted by members and is currently in place.

As a council, we were involved in forging a common stakeholder position on the Pharmacy Practice bill and the Kenya Food and Drug Authority. This legislation is now at various stages in Parliament.

A lot of support and mobilization is needed in order for pharmacists to reclaim their profession, and to comply with International best practices.

“There is one quality that one must possess to win, and that is definiteness of purpose, the knowledge of what one wants, and a burning desire to possess it.” Napoleon Hill

As a member of the Executive committee, together with the outgoing Hon. Secretary, Dr. Juliet Konje, we proposed changes to enhance service delivery at the PSK office. A professional Operations Manager with an MBA was brought into the office to streamline operations, resulting in greater efficiency.

To further raise PSK profile and meet its operational needs, we acquired a PSK Van, that was flagged off at KICC by the PSK President. This has improved our operations tremendously.

As a council, we revamped the PSK website but still felt it was inadequate. We therefore decided to overhaul and install an ERP program that will manage both the CPDs and the finances of PSK. This is a complete front end to back end solution, which is being installed in various stages, with the new interactive website just launched. Members will now be able to complete CPDs online and verify their CPD points real-time.

Furthermore, a policy was adopted allowing members to pay their arrears in installments. Currently, one just needs to pay for their membership for the current year to become a member. The arrears can be paid in installments thereafter. This has boosted PSK membership especially in the Public Sector.

PSK has also sought to improve member welfare by partnering with various parties. PSK is now a recognized insurance agent of AIG, and this allows members to access better rates than the market. Our lead sponsor in the last symposium, Jubilee Insurance, has also offered similar packages to PSK.

As a pharmacist practicing in distribution and community pharmacy, I am very passionate about the elimination of ‘quacks’ and improvement of current practice. As a council, the Green Cross accreditation was re-visited to raise the standards of practice. This has been positively received by our members. A media campaign will follow shortly to ensure that the public is sensitized on the need for good pharmaceutical care by a qualified pharmacist.

I have also moderated the Distributor Break out at the PSK Annual Symposium. Significant strides in distribution are being made today including the standardization of Good Distribution Practice and the development of Good Trade Practices, including harmonization of the current credit policy in the industry. PSK was fully involved in the lobbying of the amendment to the VAT bill, to ensure our local industries were not adversely affected. High level participation is now
a reality with the PSK president now a part of the Presidential roundtable.

I wish to thank all members of committees and breakouts we have worked with, since without them we would not have achieved what we did in our last term.

Much still needs to be delivered and completed. We wish to assure members that with their support, we shall work towards delivering results. We are up to the task!

God bless you and God bless Pharmacy!

**REVAMPED PSK WEBSITE**

The Pharmaceutical Society of Kenya (PSK) is pleased to announce the launch of the revamped PSK Website, after almost two years of hard work in research and development.

Kindly follow the PSK CPD User Manual to register yourself.

**Salient features of the website:**

- Convenient Online CPD management and Android application (PSK CPD) allowing for automated marking for articles, CPD point awarding, and tracking CPD progress.
- Annual renewal of membership and payment via mpesa.
- Access to PSK calendar of activities.
- Member generated bio-data accessible to the public.
- Member log in to access and discuss sensitive documents in a private forum.
- PJK soft copy Downloads available
- Green Cross Applications Available for Pharmacies.
- PSOK Investment opportunities information will be present.
- Advertisements from Sponsors will be welcome.
- Job Vacancies announcements will be displayed.
- Forum where members can post content to spark discussion and share knowledge.
- All PSK journals and magazines will be downloadable.

**HUMOUR**

**Miracle Drug**

A miracle drug is one that is now the same price as it was last year.

**Birth Control Pills**

An elderly woman goes into a doctor’s office and tells the doctor, “I’d like some birth control pills.”

“But Mrs. Smith,” the doctor replies, “You’re 75 years old. What possible use could you have for birth control pills?”

“They help me sleep better,” the woman says.

Confused, the doctor asks, “How in the world do birth control pills help you to sleep?”

The woman explains, “I put them in my granddaughter’s orange juice, and I sleep better at night.”

Source: [http://www.pharmacytechs.net/blog/pharmacist-jokes-and-pharmacy-humor/](http://www.pharmacytechs.net/blog/pharmacist-jokes-and-pharmacy-humor/)

**CALL FOR PAPERS**

We would like to encourage all members to publish manuscripts in the Pharmaceutical Journal of Kenya and The Pharmacist. Our present edition of the PJK has an International Standard Serial Number (ISSN). This means that PJK is recognized internationally. The Pharmacists is published in soft copy.

Kindly be reminded that the PJK is read by more than 1000 PSK members, and more than 1500 other professionals in the healthcare industry nationwide. Please take the opportunity to publish locally and be recognized internationally. There are no charges attached to publishing your work. The Pharmacist is a magazine which aims at updating you on PSK activities, and interesting reading material.

We accept only original works. If you would like to provide a manuscript for the PJK, please follow the rules for submission found within our PJK especially with regards to referencing. If you would like to publish a piece in The Pharmacist, you may do so by e-mailing your article to us.

As you look through our present PJK on the PSK website, you will find advertisements in addition to manuscripts. We appeal to our colleagues in the various sectors to encourage their places of work to advertise in our journal.

For any queries feel free to contact Dr. Nadia Butt through pskjournal@gmail.com or nadia_rizvi@hotmail.com.

With profound regards,
Before we delve into my story, full disclosure is necessary; my experience is not one I would have shared with all and sundry at my will initially, but at some point I felt the need to do so. I am Diabetic. I am in this quagmire and have come to realize that I am not unique. I got sick, very sick that I had to be admitted. And, I DID NOT EVEN REALIZE IT. Sometimes it’s easier to diagnose a patient than yourself.

About 3 months ago, I finally walked into the Doctor’s office. I remember that day so vividly, 1st September 2014. I had suspected for a while that perhaps I could be diabetic, but wasn’t willing to admit it to myself until I was admitted for the same that very day. It took a bit of a toll on me. The first six hours were especially difficult. I was an emotional wreck. I was totally inconsiderable after the confirmation. Looking back, I believe my biggest issue was not really with the disease, but how I missed all of the classic symptoms and getting it at my age.

Diabetes as we all know is a metabolic disease in which the body’s inability to produce any or enough insulin causes elevated levels of glucose in the blood. I do not need to educate you on what Diabetes is because “apparently” we all know about it and deal with patients with the condition on a day to day basis. What is important to note is that many people have Type 2 diabetes for many months’ up to years without even realizing it, because the early symptoms tend to be general.

Some of the symptoms are:
- Excessive thirst and increased urination
- Fatigue and frequent loss of breath
- Weight loss and loss of muscle bulk
- Itching around the vagina, or frequent episodes of thrush
- Slow-healing sores and/or frequent infections
- Blurred vision
- Numbness, tingling, or pain in the toes, feet, legs, hands, arms, and fingers

I have Type 2 Diabetes. One of the reasons I did not get diagnosed earlier is the fact that I experienced symptoms separately and was not able to link them together. In fact, any symptom I experienced, I treated it as a separate medical condition.

To the best of my recollection, I experienced the initial symptoms back in late May. I remember sitting at my desk at the office and having sharp pains in my feet followed by numbness i.e., “pins and needles.” I experienced this on several occasions but for brief periods of time and thus I did not take them seriously. I concluded that since I spent a lot of time behind my desk, I just needed to stretch and walk around more often. Next came periods of extreme fatigue and loss of breath. I also started falling sick frequently and during visits to the Hospital, I was diagnosed with bacterial infections and was treated for the same. Around the same time, I lost quite some weight. I was excited. My vision also became very blurry, I could hardly see, it was very scary for me. Then the recurrent bouts of Candidiasis started occurring.

My personal diagnosis for each symptom was as follows:
- I drink lots of water throughout the day so I overlooked my increase in water intake. The frequent urination I attributed to the long cold weather we experienced from July. I was often breathless and fatigued; climbing stairs was especially a nightmare. I actually had an episode at work where I was faint after being breathless. I went to a chest specialist who diagnosed me with Acute Asthma and prescribed some Inhalers.
- I lost over 12kgs in less than 3 months. Call me vain, but I celebrated the loss of weight because I was overweight for my height in terms of BMI. Who wouldn’t like to lose some unwanted weight? Losing weight is not easy. And, losing weight without any effort was a plus for me!

When I got candidiasis and repeatedly, I visited a Gynecologist who treated the condition and conducted other Gynecology related tests. When my vision got weaker and extremely blurry, I visited an Ophthalmologist who then sent me to an Optometrist for higher power lenses. My feet got tingly and numb on many occasions, but my biggest worry was when my hands got numb. I couldn’t feel my fingers at all at some point; I had to hold on to a hot water bottle to get some sensation in my hands.

Truth be told, if I was not a Pharmacist with knowledge of medical conditions and Specialists, I probably would have visited a general practitioner (GP). I am sure a GP would have diagnosed me earlier, after running some routine tests, Specialists focus on the condition they specialize in. The fact that I am a Pharmacist stopped me from being a patient. I experienced all of the classic symptoms; they were right there staring me in the face. But, I was never able to connect them with Diabetes. If it was any other person who presented with the same, I am certain I would have identified the condition. It was not the case when it was me.

I am only human. I couldn’t admit that I had the condition as much as I suspected it. Do tell, if it was you, would you want to confirm that your fears could be true? We, Pharmacists, have a hard time being patients. Often we misdiagnose our own symptoms or simply ignore and wish them away or seek treatment from Specialists, which is exactly what I did.

My father is diabetic and has been living with the condition for over 25 years; my beloved mother actually had complications related to diabetes before her death. My condition is Familial; I was pre-disposed genetically, that’s the only reasonable explanation for how I got it at my “young” age. That was another reason for my devastation when I confirmed my condition. I never envisioned myself a diabetic at my age but here am I, a diabetic under 40 years of age. I am able to laugh about it now, but I have to admit I was embarrassed at first because I misdiagnosed myself and imagined that if I was to ever be diabetic, I would be over 50 years of age like most of my other relatives when they were diagnosed and are living with the condition. I was in denial.

I felt it was important to share my experience because I believe that there is a level of nonchalance and ignorance we as healthcare professionals exhibit when diagnosing ourselves. Maybe it was just me, but I can tell you one thing for certain, I missed it and so did my Dad (a Medical practitioner) over 2 decades ago when he was diagnosed with Diabetes. There are other Pharmacists who are Diabetic who shared their experiences with me when I opened up and shared my experience; many others have family members living with the condition.

Diabetes is manageable; we just need to adhere to a strict regimen of medication, healthy meals, exercise and most importantly positive thinking and living. That is what I am doing.

Let’s remember that although we are Pharmacists. We can be patients too, after all, we are human. It can happen to us.

Please take the time to observe yourself and go for checkups every so often.
The word ‘elephant’ has both Greek and Latin origins and is derived from the elephant’s scientific genus name ‘Elephas’. In Greek linguistics, ‘elephos’ represents an antlered beast or stag. The roots of the word elephant in Latin is divided into two words: “ele” which means arch and “phant” which means huge. The Swahili name is “tembo” or “ndovu.”

It is believed that the elephants originated approximately 16 million years ago and the two genera (Lexodonta of Africa and Elephas of Asia) separated from one another approximately 7.5 million years ago.

The African Elephant is the largest animal on land. Adult males weigh between 4,800kg and 6,300 kg; females are smaller and weigh between 2,700kg and 3,600 kg. Their shoulder heights range between three to four meters. Elephants are among the most recognizable animals on the planet, owing largely to their size and distinct features, from their large ears, protruding trunks and precious tusks - it is hard to miss an elephant.

Unfortunately, African Elephants face a great deal of challenges and could one day become extinct. Their numbers continue to dwindle due to the careless behavior of humans. Poachers are responsible for hundreds of thousands of deaths of African Elephants, due to the precious commodity that is their tusks. It is very sad to note that African Elephants are mercilessly killed every day by poachers.

Poachers make their wealth from selling ivory in a very active black market. Apart from poaching, humans have also encroached on the natural Elephant habitats as urbanization takes center stage.

The sophistication of human weapons weighs heavily against the survival of Elephants and they are often eliminated by the same people entrusted to protect them.

But why are Elephants so important to us one may ask? Well, apart from being a natural treasure and tourist attraction, the presence of African elephants helps to maintain suitable habitats for many other species. In Central African forests, up to 30 percent of tree species rely on elephants to help with dispersal and germination. They play a pivotal role in shaping their habitat, because of the enormous impact they have on fresh water and forest cover as a result of the sheer volume of food and water they take daily. It is therefore of upmost importance to protect and conserve these exquisite yet greatly endangered animals.

**Taxonomy**


**Distribution**

African elephants have a sub-Saharan distribution, with forest elephants primarily inhabiting western and central regions of Africa; savanna elephants inhabit the eastern and southern regions.

African elephants inhabit a diverse array of habitats including tropical forests, savannas, grasslands and woodlands. These elephants usually migrate at the beginning of the dry season, between June and November, and head towards more hospitable locations near rivers and water sources which are less prone to drying. When the rainy season arrives, usually from October to December and March to June, elephant herds return to native regions to feed on the lush, green vegetation that the rains helped regenerate. Elephant migration allows time for the re-growth of vegetation in exhausted grazing areas.

**Behavior**

Female African Elephants are extremely social and will spend their entire lives in the same group. They take very good care of their offspring, and offer help to fellow females. They are excellent communicators, both verbally and non-verbally. They are very protective of one another. They exhibit a variety of behaviors including being able to identify...
the bone remains of other elephants. They can express a variety of emotions including sorrow. Adult male elephants, however, are solitary in nature but may associate with other bulls (adult males) in small, unstable groups. Males will leave the family unit (natal unit) between 12 and 15 years of age. African Elephants are not easily domesticated, unlike their Asian relatives.

Diet

African elephants can consume up to 600 pounds of food every single day. In order to do this they migrate in a specific pattern throughout their natural habitat. They consume plants, trees, bark, pulp, fruits, shrubs, and most other vegetation. They cannot digest more than 40% of what they consume, and thus they feed extensively; they spend sixteen to eighteen hours, or nearly 80% of their day, feeding. It is estimated that nearly 60 percent of elephant feces is undigested or partially digested vegetation. This poor absorption of nutrients is one of the reasons why elephants are considered a keystone species. The undigested or partially digested vegetation generates new plant growth as it is deposited on the elephant's travails. Elephants require approximately 68.4 to 98.8 liters of water daily, but may consume up to 152 liters. To supplement their diet, elephants dig up earth to obtain salt and minerals.

Reproduction

The male reproductive organ can be as long as 2 meters and weigh up to 30 kg. While elephants do not have a given season for reproducing, they are more likely to do so during the rainy periods of the year. Gestation can be up to 22 months. Birth of an elephant is well celebrated among the females in the herd. The herd cares for the mother and the child until about 4 years of age. Females are reproductively receptive for about three weeks, but conception is only possible for three to five days. Reproductive receptiveness is often displayed in females by greater interest and enthusiasm at the approach of a musth bull. Such females may also exhibit an estrous walk, characterized by holding their head high and frequently looking over their shoulders. Estrous females will also vocalize at this time. These sounds travel long distances and help distant musth bulls to locate the female.

Competition for potential mates is settled by bulls through a trial of strength, i.e. pushing, tusking, wrestling, and ramming. The weaker of the two bulls is forced to retreat and gives up mating rights. Rarely do these mating fights turn brutal, as they are a quick assessment of strength and virility. The younger elephants are often no match for the strength of the older elephants which is why they don’t get to mate until they are much older. There is speculation that younger males back away from the older ones out of respect and admiration for the elders, rather than fear. Males assess a female’s reproductive status by testing her urine for hormones. Chemical information is picked up through the trunk, blown into the roof of the mouth, and then detected by the Jacobson’s organ in the upper palate of the mouth. The courtship between a male and a female elephant is short lived. They will rub their bodies on each other and even wrap trunks. The females tend to run away from the males, and the male will have to pursue. This game of cat and mouse can continue for a very long time before actual mating occurs.

The male elephants will fan their ears more when ready to mate. This allows them to spread their scent over a wider area to attract potential mates. Older males between 40 to 50 years of age are most likely to breed with the females. Females are ready to breed at the age of approximately 14 years. However, there have been documented cases of male elephants engaging in sexual activities amongst each other due to their urge to reproduce, and the lack of available females. This is why most zoos often have a male and a female or two females instead of two males in one area.

Baby Elephants

Elephants hold the record for the longest gestation period of 22 months. They weigh in at 260 pounds at birth. They are blind at birth. The babies often follow right behind their mothers, with tails wrapped around each other, as the herd is on the move. Other females will care for the young too; they even feed the babies in order to satisfy the requirements of milk the child needs. Babies can drink up to 10 gallons of milk daily.

Baby elephants do not exhibit high levels of instinct for survival as other animals, and thus rely upon their mothers and the herd. But, they are fast learners, and pick up new skills through observation.

It has been attempted a few times to create hybrid offspring between species of elephants in captivity. All of these offspring have died within a couple of months due to complications and featured physical deformities. Most experts believe that with elephant numbers so low, there is need to focus on successful breeding programs and not experimentations such as these.

Skin

Elephant skin is wrinkled in appearance, with African elephants more wrinkled than Asian elephants. Wrinkles act as a cooling mechanism by increasing the skin’s surface area. The additional skin and wrinkles trap moisture, which then takes longer to evaporate. Therefore, wrinkles keep elephants cooler, for longer, than if they had smooth skin. Elephant skin can be up to 3.8 cm (1.5 in.) thick in certain places. However, the skin is sensitive to touch, detecting insects and changes in its environment. The combination of thick skin and a thin layer of fat beneath the skin enable the elephant to tolerate cold temperatures. Overall skin coloration for elephants is grey.
Trunk

Undeniably the elephant’s most vital and distinct characteristic is its trunk. The elephant’s trunk is an extension of the upper lip and nose. It functions for grasping, breathing, feeding, dusting, smelling, drinking, lifting, sound production/communication, defense/protection, and sensing. The trunk contains an estimated 100,000 muscles and tendons, providing extreme dexterity, flexibility and strength. Elephant trunks are capable of expanding, contracting, and moving in a diverse array of directions. African elephants have two finger-like projections at the tip of the trunk. These finger-like projections have many sensitive nerve endings and are capable of fine motor skills, such as grasping small and delicate objects.

Elephants’ trunks exhibit a keen sense of smell and are used to survey the environment. The trunk is raised and waived in the air to gather scent particles. Through the trunk, the scent particles are then carried to a specialized gland called the Jacobson’s organ, located in the roof of the mouth. The Jacobson’s organ is able to gather information about the surroundings by detecting and analyzing molecules and particles from the air. Through this process, elephants are capable of locating water sources up to 19.2 km away and can even determine the reproductive status of distant elephants.

Elephants can reach vegetation as high as 5.7 m by rearing up onto their hind legs and extending their trunk. Elephant trunks are very powerful and are capable of uprooting an entire tree trunk, tearing down heavy branches, and delivering a forceful blow in self-defense.

Small sensory hairs extend the length of the elephant’s trunk enhancing its sensitivity. These small hairs facilitate tactile communication during courtship and when caring for young.

Ears

Another fundamental feature of the Elephant is its ears especially the African Elephant whose ears interestingly resemble the map of Africa. Elephants use their ears to funnel in sound waves from the environment, contributing to their keen sense of hearing. Elephant ears are about one-sixth the size of its entire body and primarily function as a cooling mechanism. The ears contain extensive networks of tiny blood vessels, which are visible at the outer margins, where the skin is only about one to two millimeters thick. The warm blood cools as it circulates through the vessels in the ear, due to the thin layer of skin that separates it from the outside air. The cooler blood then circulates back into the body, helping reduce the overall body temperature of the elephant. The size of elephant ears is proportionate to its geographic distribution. The closer to the equator the elephant resides, the larger the ears, allowing more heat to dissipate from the body. African elephants live closest to the equator, followed by the Asian elephants. The now extinct woolly mammoth, lived near the North Pole, and had the smallest ears.

Tusks

The most valuable feature of the African Elephant, at least to human beings, is without a doubt their tusks. Both African and Asian elephants have a total of 26 teeth including two upper incisors (tusks), 12 premolars (non-permanent teeth similar to baby teeth) and 12 molars. Asian elephants have smaller tusks than those of their African kin and females have smaller tusks than males. An adult male tusk can weigh between 50kg and 79 kg while an adult female’s tusk can weigh between 18kg and 20 kg, with one of the heaviest tusks ever weighed being more than 100 kg. Elephants are born with temporary incisors (tusks) that are replaced with permanent ones between six and 13 months of age. Permanent tusks grow continuously at a rate of about 17 cm per year, reaching lengths of up to 3.5 m for adult African male elephants. The upper one-third of an elephant’s tusk, where it is embedded in the bone of the upper jaw, is mostly hollow and carries a single nerve. The top third embedded portion of the tusk functions as an anchor when digging and uprooting vegetation and aids defense. Elephant ivory is distinguished from other animal dentition by its unique cross section patterning.

Elephants normally prefer one tusk over the other, either left tusked or right tusked, similar to being left or right handed in humans. The preferred tusk is known as the master tusk.

Elephants use their tusks for a variety of tasks. Principally, they are formidable weapons against potential predators like the tiger (although tigers will only ever attack young or juvenile elephants) or in battle against other elephants. They are also used to aid foraging, digging, stripping bark and moving things out of the way; trained logging elephants are capable of lifting large logs with their tusks. There is also a display element to tusks and they can attract the interest of females.
Threats

The African elephants do not have any major threats from natural predators, but keeping them safe from humans is very difficult, even with conservation efforts in place to protect them from poaching and keeping their habitats preserved. This subjects elephants to potential extinction. According to the World Wildlife Organizations African Elephants are currently vulnerable with an estimated population of only 470,000. Numbering three to five million in the last century, African elephant populations were severely reduced to its current levels because of hunting and poaching. In the 1980s, an estimated 100,000 elephants were killed each year and up to 80% of herds were lost in some regions. In recent years, the growing demand for ivory, particularly from Asia, has led to a surge in poaching. Elephant ivory is used to make billiards balls, piano keys, identification chops and many other items for human pleasure.

Populations of elephant, especially in southern and eastern Africa, that once showed promising signs of recovery could be at risk due to the same. In 1989, the Convention on International Trade in Endangered Species (CITES) banned ivory trade placing hunting outside the law. Unfortunately poaching does still take place, but in most of the Asian elephant’s ranges it is under control.

Apart from the imminent threat from poachers, African Elephants are also threatened by habitat loss and fragmentation. African elephants have less room to roam than ever before, as expanding human populations convert land for agriculture, settlements and developments. The elephants’ range shrank from three million square miles in 1979 to just over one million square miles in 2007. Commercial logging, plantations for biofuels and extractive industries like logging and mining not only destroy habitat but also open access to remote elephant forests for poachers. Poverty, armed conflict and the displacement of people by civil conflict also add to habitat loss and fragmentation. All of these factors force elephants into smaller islands of protected areas and hinder elephants’ freedom to roam. As habitats contract and human populations expand, people and elephants are increasingly coming into contact with each other. Areas where farms border elephant habitats or where there are elephant migration corridors, there is often damage to crops and villages. This leads to conflicts and invariable loss of both elephants and humans.

Diseases and Pathology

Elephants suffer from cardiovascular disease (blocked arteries, aneurysms) as they age. Other medical problems include arthritis, septicemia, anthrax, tuberculosis, foot & mouth disease, elephant pox, rabies, pneumonia, dysentery and encephalomyocarditis virus.

It is sad to note the survival of elephants faces a couple of threats in the coming years. Habitat loss is one of the key threats, loss of land being used for coffee, tea, rubber and teak farming. Many climate change projections indicate that key portions of elephants’ habitat will become significantly hotter and drier, resulting in poorer foraging conditions and threatening calf survival, and increasing conflict with human populations taking over more and more elephant habitat.

The loss due to poaching and illegal ivory trade cannot be overemphasized.

Bibliography:


PSK CPD User Manual

Start

Log on to www.psk.or.ke from your web browser

Click on to start the registration process as below

Requirements for Registration

1. Your Registration Number¹
2. Your Email address²
3. Your Phone Number³
4. Your Names⁴

This will help quicken the process of verification.

¹ As provided by the PPB
² A valid Email Address you registered with at PSK
³ A valid Phone number
⁴ Name as it appears on PSK registry
Registration

Filling Registration Form

Provide your username
Provide your username
Provide your password and repeat
Copy the security code into the textbox below
Click “Register” to submit your details

Confirmation Mail sent to your Email Inbox

If all the details are correct an E-mail is sent to the email address you specified. You must verify that the email address provided is yours by clicking the link on the mail

Email

Click on the link on the Email sent to verify the account
Email Account Verification/Activation

Log in

Profile Building

Default Profile

- Add/Edit current Working Station
- Add academic qualification

CPD Portfolio: Lists all activities you have claimed

Snapshot Performance

Click to Add Photo

Click to Change Password
1. **Edit Profile,**

   ![Profile Edit](image)

   - **Specify**
     - Membership Number
     - Choose your title
     - Add Your Name, Email address, ID/Passport Number, Postal Address, City and your Current phone Number for communication

   Click on “Save”

2. **Edit Work stations**

   ![Work Station Edit](image)

   - **Click add**

3. **Edit Academic Qualifications**

   ![Academic Qualification](image)

   - **Click add Academic Qualification**
4. **Add/Edit Photo**

**Upload Profile Photo**
- Select an image from your hard drive (Max size: 3MB).
- Click on "Upload" to upload your photo.

**Specify**
- Name of the Qualification
- Awarding Institution
- Timelines

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**Final Outlook**
Claim CPD Points

1. Token based

Step 1.

My CPD Portfolio

Step 2

Key in the Token Number and click Claim

Step 3

Activity will be listed/added on your CPD diary as shown below

2. Non Token Based
Click on the **Non Token Claims** tab.

- Select the activity type
- Specify the Name
- Describe the activity
- Specify Start and End date
- Specify Venue
- Upload the evidence that you attended the activity e.g. Certificate
- Click **Submit** to submit the claim for verification and awarding points
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