

The Golden Mortar



Newsletter of the Southern Gauteng Branch of the Pharmaceutical Society of South Africa and Associated Sectors

Edition 5/December 2020



END OF YEAR MESSAGE FROM THE GOLDEN MORTAR EDITORIAL BOARD

Dave Sieff (Chairman & on behalf of The Editorial Board)

Well, this year has rushed to get itself over its many trials and problems and into a - hopefully better - new and fresh start without the current challenges. Populations, businesses, employment, society, families, and life generally as we knew it have suffered, with too many casualties and sad and unfortunate losses. Truly an "Annus horribilis" - to quote Queen Elizabeth II.

The impact of the imposed and extended Corona Virus lockdown, while disruptive of many aspects, has had some positive consequences as well, the most important being the changing forever of the way we will work in the future. More work will be done more often at home by more employees, with only the most necessary office-based tasks being required; this will in turn affect the size of premises needed for businesses to run cost-effectively.

After initial unforeseen delays early in the year, The Golden Mortar (GM) got off the ground with a short **Bulletin** version to keep the membership informed of the situation and that we were keeping in touch. We then completed and distributed the **full Edition 1**. In all 3 Bulletins and 5 full Golden Mortar Editions were produced for the year 2020.



Dave Sieff

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The Editorial Board has representatives nominated on behalf of the Southern Gauteng (SG) Branch and the PSSA National Museum (Mr. Ray Pogir); the SAACP SG Branch (Mr. Gary Kohn); the SAAP Executive (Mrs. Tammy Maitland-Stuart); the SAAHIP SG Branch (Mrs. Tabassum Chicktay); the Academic Sector (Ms. Stephanie Leigh-de Rapper); the Wholesale Sector (informally - Dave Sieff); our Branch Secretary, Ms. Cecile Ramonyane in attendance; and the presiding Chairman (Dave Sieff).

Virtual meetings of the Board are held to attend to the planning, the sourcing of articles and reports, the finances, and administrative matters, for each GM edition and the Bulletins, as well as communicating by email. Cecile and the Chairman of the Board are responsible for the final editing of copy, while the compilation and layout are ably performed by Cecile.

Contributions of articles and reports, e.g. of CPD or Workshop sessions, are requested from the SG Branches and Sectors, while health and medical conditions are regularly provided by the Amayez Information Centre, for which we are very grateful; advertising of services and official Notices of AGMs are included as well.

All of this is under the kind auspices of the PSSA SG Branch,

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whose financial support and premises provided are vital to our continuing operation, and are greatly appreciated, as are the grants received from the SAACP SG Branch.

It remains for me to end with a message of hope and anticipation for the approaching festive season, safety if you are traveling, a relaxing break from the pressures of work and life, and best wishes for a healthier and more 'normal' situation, to all our readers and their families, and may these be extended also to all the people of our country.



A man goes to the Optician for his eye test. The Optician asks him what he can see. "I see empty airports, empty football grounds, closed theatres and closed pubs." That's perfect says the Optician, you've got 2020 vision!



Vitamin D is a fat-soluble vitamin. Besides the significant clinical role of vitamin D and its metabolites in calcium homeostasis and bone metabolism, vitamin D regulates many other functions, such as modulation of cell growth, reduction of inflammation, neuromuscular function and immune function.

SOURCES OF VITAMIN D

Vitamin D (via dermal synthesis) obtained from ultraviolet B (UVB) rays in sunlight is the main natural source of vitamin D. The amount of vitamin D obtained from UVB sunlight exposure is influenced by factors such as season, time of day, cloud cover, smog, latitude, clothing style, skin type and the use of sunscreen.

Only selected foods in nature contain vitamin D. Fish liver oils and the flesh of fatty fish such as tuna, salmon and mackerel are listed as some of the best sources of vitamin D. Other dietary sources of vitamin D include supplemented or fortified food products, such as breakfast cereal and milk.

There are two forms of oral vitamin D supplements available:

- D2 – ergocalciferol (manufactured by UV irradiation of ergosterol in yeast).
- D3 – cholecalciferol (manufactured by irradiation of 7-dehydrocholesterol from lanolin and the chemical conversion of cholesterol).

VITAMIN D SYNTHESIS AND METABOLISM

Vitamin D obtained from dermal synthesis, dietary or supplementary sources is biologically inactive. These biologically inactive forms are converted enzymatically, first in the liver and then in the kidney, to the active form of vitamin D - namely 1,25-dihydroxyvitamin D also known as calcitriol (Diagram 1).

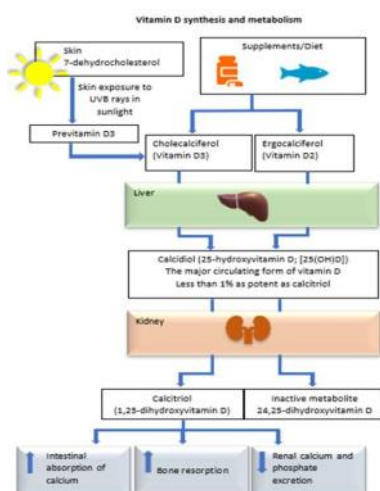


Diagram 1.
Pathways of vitamin D synthesis and metabolism and its effects on calcium and phosphate homeostasis.

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VITAMIN DEFICIENCY

• **Skeletal health**

Vitamin D promotes calcium absorption from the bowel and enables mineralisation of newly formed osteoid tissue in bone. Overt vitamin D deficiencies may cause:

- * Rickets in children (which is characterised by a failure of bone tissue to properly mineralise, resulting in soft bones and skeletal deformities) and
- * Osteomalacia (weak bones) in adults.

In most developed countries, rickets and osteomalacia are now uncommon. However, even in most developed countries, subclinical vitamin D deficiency occurs and may lead to secondary hyperparathyroidism, muscle weakness, bone loss, risk of falls and fragility fractures, especially in older people. Inadequate vitamin D consumption may also contribute to the development of osteoporosis, by reducing calcium absorption.

• **Extraskeletal health**

Epidemiological studies suggest that the risk of cancer, cardiovascular, infectious and autoimmune diseases are "higher when 25(OH)D levels are below 20 ng/ml and that the risk decreases with higher levels." However, a causal association between poor vitamin D status and cancer (risk or prognosis), cardiovascular, metabolic, infections and autoimmune diseases have not been established. Further research is needed to determine vitamin D's potential role in extraskeletal disorders.

There is also a growing interest in vitamin D supplementation during the Coronavirus Disease 2019 (COVID-19) pandemic. However, mixed findings have been published. Several large controlled trials have been initiated in France, Spain and other countries and results from these trials would provide insight on the role of vitamin D in both prevention and treatment of COVID-19.

HOW IS VITAMIN D STATUS DEFINED?

Serum 25(OH)D levels are used for the assessment of vitamin D status, since these levels reflect vitamin D obtained from both dermal synthesis and dietary/supplementary sources. Table 1 shows the levels as defined by the South African Clinical Guidelines for the Diagnosis and Treatment of Osteoporosis (published 2017).

Table 1. Serum 25(OH)D levels	
25(OH)D (ng/ml)	Indication of vitamin D
Below 12	Deficiency
Between 12 and 19	Insufficient
20 or above	Sufficiency

There is no consensus regarding the safe upper limit. However, levels of above 50 – 60 ng/ml have been suggested as the upper safe limit, due to concerns about potential adverse outcomes.

SCREENING FOR VITAMIN D DEFICIENCY IN ADULTS

Widespread testing for vitamin D deficiency is considered unnecessary. However, serum 25(OH)D levels should be obtained from individuals where vitamin D deficiency is likely to be present.

The following groups may be at risk of vitamin D deficiency and may require dietary supplements to meet their daily need for vitamin D:

Individuals who are:

- * Elderly. Deficiency in older adults may occur due to inadequate intake and/or limited exposure to sunlight. In addition, the skin's ability to synthesise vitamin D declines with age.
- * Obese. "Fat tissue serves as a reservoir for vitamin D3." As a result, obese individuals may have lower levels of circulating vitamin D.
- * Malnourished.
- * Using medication that may accelerate vitamin D metabolism, for example, anticonvulsants (such as phenytoin) and antifungals (such as ketoconazole).

Individuals who have:

- * Limited sunlight exposure, for example, the consistent use of sunscreen, people who are housebound/institutionalised/hospitalised and those covering their bodies for religious reasons.
- * Increased amounts of the pigment melanin, for example, people with darker skin tones are less able to produce vitamin D from sunlight.
- * Malabsorptive disease, including celiac disease and inflammatory bowel disease.

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- * Liver or renal impairment. Impairment could result in decreased endogenous synthesis of the active form of vitamin D.
- * Osteoporosis.

SUPPLEMENTATION IN ADULTS

Recommendations regarding vitamin D are mainly based on the beneficial effect of vitamin D on skeletal health.⁴ Supplementation with vitamin D and calcium have been shown, in several meta-analyses, to decrease the risk of osteoporotic fractures in older adults.

The recommended dietary allowance (RDA) of vitamin D (assuming minimal sun exposure and adequate calcium intake to achieve beneficial effects on skeletal health) for adults:

- * 19-70 years of age is 600 international units (IU) per day
- * > 70 years of age is 800 IU per day

Some people, for example, patients with malabsorption syndromes, obese patients, those confined indoors and people using medication that may affect vitamin D metabolism may require higher doses.

The RDA for pregnant and lactating women is 600 IU per day. However, higher levels may be needed in order to maintain adequate levels.

EXCESSIVE VITAMIN D

Due to photoconversion of previtamin D₃ and vitamin D₃ to inactive metabolites, as well as the induction of melanin production, prolonged exposure of the skin to sunlight does not result in toxic amounts of vitamin D₃.

Inappropriate use of vitamin D preparations, however, may lead to vitamin D intoxication. It is not clear at which dose vitamin D becomes toxic. According to Du Plessis M, 2017, "the maintenance tolerable upper limit of vitamin D, which is not to be exceeded without medical supervision, is 4 000 IU per day for healthy adults."

Excessive amounts of vitamin D result in hypercalcaemia (due to an increase in calcium absorption in the gastrointestinal tract) and hypercalciuria. Signs and symptoms of acute vitamin D toxicity are due to hypercalcaemia and include muscle weakness, nausea, vomiting, confusion, anorexia, polyuria, polydipsia.


Chronic excessive use may lead to bone demineralisation, nephrocalcinosis (calcium deposits in the kidneys) and pain. Some studies have also suggested a link between chronically high levels of 25(OH)D and a modest increase in the risk for some cancers (including prostate and pancreatic cancer), falls and mortality.

Concomitant use of vitamin D with calcium supplements may increase the risk of kidney stones.

CONCLUSION

There is consistent and conclusive evidence to support the benefits of vitamin D on skeletal health. However, more robust studies are needed to better understand the relationship between vitamin D and extraskeletal health.

BIBLIOGRAPHY ON REQUEST



The PSSA Book Department


Do you know that the Book Department has a range of essential publications for pharmacists at preferential prices for members of the PSSA?

From overseas publications such as Martindale, Merck Manual and Dorland's Illustrated Medical Dictionary to local publications such as the Daily Drug Use, South African Medicines Formulary (SAMF) and the Scheduled Substance Register.

Ordering is as simple as 1, 2, 3.

1. Go to the PSSA website, www.pssa.org.za click on Membership and then Member Services.
2. Complete the order form and submit it.
3. Make payment via EFT.

Or contact Dinette at PSSA National Office on (012) 470-9559 or at dinette@pharmail.co.za

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Thanushya Pillay

PSSA SG BRANCH CHAIRMAN'S YEAR-END MESSAGE

2020! What a year! It has challenged and changed us. Changed the way we work, communicate, convene meetings, host and attend CPDs. It has kept us **physically** apart, but brought so much into our homes.

Life as we knew it, has changed. So too, the Branch and the Glenhove Events Hub have adapted to a new normal, which it is anticipated will take us to new heights in 2021.

Despite all the changes and challenges brought on by the pandemic, there is one thing that we as a profession can be grateful for - pharmacy will always be relevant. Our colleagues in industry have responded to the call to innovate, and the production of at least 2 vaccines is imminent, bringing hope in a time of despair. Our colleagues in academia have ensured that the academic year continues successfully with a capable "class of 2020" who will graduate and go forth and serve South Africa as we emerge from the pandemic, and have markedly contributed to documenting the trials and tribulations of the pandemic. Our colleagues in community pharmacy, the brave front liners, have been the most accessible, first port-of-call for patients wanting to stay safe or recover. Our colleagues in hospital pharmacy, also at the front line of the pandemic, worked alongside other healthcare professionals, overcoming their own fears and concerns, to provide much needed pharmaceutical care to the critically ill.

Maintaining relevance in a time of redundancy is a strength to be built on to take pharmacy and the health of our people forward.

As this year comes to end, it brings with it the threat of a possible second wave of infections, but also the hope of a vaccine.

We are reminded of all the sacrifices that needed to be made; by our friends, colleagues, family and patients who have succumbed to the virus; of our vulnerable loved ones whom we strive to keep safe; that if we have survived 2020 to this point, intact, that we have a lot to be grateful for; to be mindful of those who have lost their jobs and livelihoods, and most of all, we are reminded to value that which is most important - life, health, and happiness.

I wish all our members and readers a safe and blessed festive season. For those fortunate to be taking a break, I hope you have a well-deserved rest, and for those who will continue to serve, I thank you for your contribution to health and pharmacy.

Special words of gratitude to the staff at the Branch and the members who serve passionately and tirelessly on the Southern Gauteng PSSA, SAAHIP, SAAP, Academy and SAACP branches – your efforts have kept the branch going and alive during the pandemic, certainly a commendable task.

I look forward to embracing 2021 with all its new opportunities and lessons. Blessings and happiness to all.



WITS PHARMACY STUDENT COUNCIL 2020/2021 EXECUTIVE COMMITTEE

Compiled by Siviwe Ngalo



Ntombizodwa Luwaca

My name is Ntombizodwa Luwaca and I will be serving as the Chairperson for the Wits Pharmacy Student Council 2020/21. I am a passionate leader whose aim is to ignite the desire to dare to make an impactful and positive change in all the people that I lead. I am hopeful that this term that I will be serving will be a fruitful one and will leave a meaningful change, not only in my university space, but in the pharmacy world at large. I hope everyone is well and staying safe.

My name is Zenande Ndlwana. I am the Vice-Chairperson for the Wits Pharmacy Students Council – 2020/2021. I am currently doing my third year of the pharmacy degree. I have always shown interest in leadership roles, since primary school days, and believe that I have a natural leadership trait, I suppose this comes with being the eldest of three children. I come from a family of health care workers, I guess it was inevitable that I develop an interest and passion for helping the ill. I hope to use my degree and other traits that I will learn along the way, to one day take up a leadership role in advocating for and making a difference in our healthcare system. I enjoy watching series, baking, watching sports and hiking on weekends. I enjoy traveling as well, and one day look forward to doing a road trip around our beautiful country. I look forward to the new challenges that I will face coming into this position. Developing strong relationships is the foundation of all I do as I believe that teamwork will always get all of us further.



Zenande Ndlwana



Ulender Mkhonto

My name is Ulender Mkhonto and I am the treasurer for the Wits Pharmacy Student Council 2020/2021. I am dedicated to helping people find themselves and being in the right mental state. If we are all in the right mental state it makes it easier for all of us to do our best and give our all in everything we do. I am a believer of finding happiness in those little things in life that we normally take for granted. In this new "life" we easily forget to be happy with the little we have and always focus on the negative. I aspire to putting happiness before all

My name is Lesiba Thole and I will be serving as the secretary of the Wits Pharmacy Student Council 2020/2021. I am enthusiastic about my work and anything I put my mind to. Being an extremely social person, I have great communication and listening skills. Additionally, I am analytical by nature which means I always have a solution-seeking behaviour regarding any challenges in both my academic and personal life.



Lesiba Thole

.../ continued on page 7



Esther Shuping	Academic Officer
Mulanga Mathoho	Event Office
Noeline Malenga	Media & Communication Officer
Samukelisiwe Mdletshe	Transformation & Community Outreach Officer

ACADEMIA YEAR END MESSAGE

The year 2020 has been a defining time for all with heaps of paradigm-shifting developments. It is very difficult to believe that we're not in a simulation chamber that is set up to run every possible consequence in chorus to test the resiliency of civilisation. COVID-19 has certainly overwhelmed even the most developed healthcare systems around the world.

Globally, schools of Pharmacy have faced unprecedented challenges to ensure the provision of sustainable pharmacy education under a pandemic. Amid the inherent sense of doom and gloom during pandemics, it has also presented academics with much light and respite. For example, many opportunities have been accelerated to introduce new models of delivering pharmacy education with a re-invigorated purpose, to progress with the modernising and reshaping the way we approach pharmacy education for future generations.



Prof Yahya Choonara



Our answers to key questions such as "What do we want our graduates to be able to do at the end of the degree?" (*and how to achieve this outcome*) are somewhat different to what was envisaged at the end of 2019. Beginning with the end in mind is always helpful, and allows us to work methodically to re-perfect and design the 'Pharmacist of the future' who will be ready to serve the profession and patients with empathy, agility and connectivity.

Universities have transitioned to remote delivery of the BPharm program. Many were fortunate in some aspects and challenged in others, to achieve goals under this *force majeure* event of life. Academics had to contend with delivering remote teaching, ensuring that purposeful experiential placements for students occurred during lockdown, re-imagine practical lab training through virtual platforms, support displaced or isolated students back home, and communicate with all stakeholders as part of a disaster management doctrine, to volunteer their time in assisting with the pandemic as well as to secure Occupational Health Safety (OHS) needs such as Personal Protective Equipment (PPE) for staff and students to mitigate any escalating challenges.

Now more than ever, do academics have to take a proactive, adaptive and collaborative approach to pharmacy education to harmonise strategic objectives and mobilise both public and private resources to build our resilience against pandemics such as COVID-19 and other *en masse* healthcare challenges we are yet to face.

With the pandemic still raging, there's still history left to be made in 2020. As pharmacists we remain the most accessible healthcare professionals to the public, who need reliable and accurate information during this time and who trust us to help them.

To our students, the learning experience has changed and we have been impressed with how fast they have adapted and continued their vital work in a coordinated and responsible manner. While we have taken our academic programs online, we remain committed to academic excellence. Our student volunteers have also answered the challenge to offer whatever services we can to be part of the solution.

To our academics, they have shown amazing flexibility, creativity and commitment to address the needs, in spite of

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the seriousness of the circumstances. Most of all, the willingness to be that dedicated Pharmacist, who is not only there in everyday life but also steps up in a national emergency, gives us the confidence in the future of our profession and that we will prevail. Pharmacists improve and save lives as well as give hope in the process, while Pharmaceutical Scientists look for solutions to current healthcare challenges.

Our confidence and resilience, coupled with our professional expertise and new learning environment, can and will change our world for the better. That is one of our key missions in Academia.

I remain deeply positive that Pharmacy will be the leading healthcare profession of the future for our country, born out of this pandemic. My best wishes and happiness to you and your families as we all look forward to a super successful 2021.

KEEP WELL AND KEEP SAFE



SARCDAl Online is a unique opportunity for buyers and exhibitors to connect and do business within a virtual community.

265 Exhibitors signed up with more than 5 000 products	22 778 Trade Buyers have visited the platform since launching on the 1st of July	95% of Exhibitors reported that they have received enquires
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SAVE THE DATE

Showcasing the latest in Local & International
gift, fashion, decor & design trends

10 - 12 MARCH 2021
09:00 – 17:00

Gallagher Convention Centre, Midrand
Hall 5

To apply to exhibit or register as a Trade Buyer
visit www.sarcdal.co.za

TRADE ONLY



SAACP SQ YEAR END MESSAGE



Winny Ndlovu




Yet another year end and it has been an unprecedented year that will go down in history for many generations to come as a tragic year, where people got sick and some died from COVID-19. We had to adapt very rapidly to a new way of doing things, no more hand shaking and hugs, no more face to face meetings. Social distancing, masks, hand sanitising was the new order of the day. Adopting to Zoom, Microsoft meetings and webinars as the new way of life.

Businesses had to go on lockdown and only essential services i.e pharmacist, doctors, nurses and food retail workers had to be on duty to save and serve the nation. Pharmacists kept their retail stores open, some went on hospital duty calls and pharmaceutical manufacturing plants had to increase capacity.

I would like to thank all the pharmacists who rolled up their sleeves and got down to business, putting their lives and families at risk.

In the process we had some casualties, some lost their lives in the line of duty. They will be remembered as heroes and I send my deepest condolences to their families.


I hope next year will be a better year. I wish you all a Merry Christmas and prosperous new year.



Professional Indemnity Insurance

You should be aware that pharmacists in all spheres of Practice require Personal Indemnity Insurance. Not to have it is simply not an option – it is a requirement of the South African Pharmacy Council.

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



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

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Fax: 086 274 0852

Southern Gauteng Branch

(Representing the Community Pharmacy Sector of the PSSA)

30 November 2020

B204/11/20

NOTICE OF THE 69th ANNUAL GENERAL MEETING

NOTICE IS HEREBY GIVEN OF THE 69th ANNUAL GENERAL MEETING OF THE SOUTHERN GAUTENG BRANCH OF THE SOUTH AFRICAN ASSOCIATION OF COMMUNITY PHARMACISTS TO BE HELD ON WEDNESDAY 10 FEBRUARY 2021 AT 19H00 FOR 19H30 AT COMMUNITY PHARMACY HOUSE, 60 FANNY AVENUE, NORWOOD, JOHANNESBURG

SUPPER WILL BE SERVED AT 19:00

AGENDA

1. Notice of Meeting
 2. Welcome
 3. Acknowledgements
 4. Obituaries
 5. Apologies
 6. Adoption of Minutes of the 68TH Annual General Meeting held on 29 January 2020
 7. Matters Arising
 8. Chairman's Report
 9. Results of Election
 10. Honorary Treasurer's Report
 - 10.1 Audited Financial Statements of the SAACP SG Branch and its subsidiary, SARCD Trade Exhibitions (Pty) Ltd as at 30 September 2020
 - 10.2 Appointment of Auditors
 11. Motion
 12. General
 13. Closure
- T. Ndlovu**
Chairman

RSVP: ella@saacp.co.za

NB. Please note that if it is not possible for the 69th SAACP SG Branch AGM 2021 to be convened at the Branch offices (Community Pharmacy House, 60 Fanny Avenue, Norwood, Johannesburg) due to Covid-19 lockdown restrictions, the AGM will be held virtually via Zoom and this change will be communicated to the Branch members.



The SAACP SG Branch is a financial contributor to The Golden Mortar.

Please visit our website: www.saacpsg.co.za

You are also able to view The Golden Mortar Editions on the website as well as to provide input to the following email address:

info@saacpsg.co.za



**SOUTH AFRICAN ASSOCIATION
OF PHARMACISTS IN INDUSTRY**



2020/2021 EXECUTIVE COMMITTEE

- ◆ Carin Archibald
- ◆ Leanne Blumenthal
- ◆ Tammy Chetty
- ◆ Prof. Yahya Choonara
- ◆ Prof. Patrick Demana
- ◆ Ingrid Duvenhage
- ◆ Dr. Mothobi Godfrey Keele
- ◆ Dr. Christine Ledimo Letsoalo
- ◆ James Meakings
- ◆ Dr. Carine Page
- ◆ Gina Partridge
- ◆ Lynette Terblanche

OFFICE MESSAGE

Cecile Ramonyane - Branch Secretary

*We were expecting Twenty Plenty in 2020 but unfortunately it was not a good year. No season lasts forever. When the storm emerges, it creates a dreadful disaster but after some time a reign of calm prevails. Human life is a combination of sorrows and happiness. **Let us appreciate our Gift of Life; take care, and be safe in these holidays.***



**FORM C****THE PSSA / ALPHA PHARM PHARMACY STAFF
CLINICAL EDUCATION PROGRAMME – 2021**

We have pleasure in introducing the eleventh year of the distance learning clinical education programme designed specially for front shop pharmacy assistants, developed and administered by Insight Medicine Information.

This programme will run in tandem with the Continuing Education programme for pharmacists and will cover subjects that will enable the pharmacy assistant to interact with customers in a knowledgeable way about commonly occurring medical conditions and which products can be safely recommended.

The subjects for 2021 include Understanding Diabetes, Covid-19, Contraception, Cancer, and Vitamins and Minerals. Each module will be accompanied by a multiple choice question test and a certificate will be awarded on successful completion of 4 of the 5 modules for the year.

This programme is also available online on the website <https://www.insightcpd.co.za>.

To register for 2021 simply fill in the enrolment form below and return it as soon as possible together with your payment to the PSSA by fax on 0866 159 835 or email adl@pssa.org.za. For registration queries contact (012) 470 9562.

For further information regarding the modules contact Glynis or Gill on tel. (011) 706-6939, fax 086 660 9527, cell 083 601 4567 or e-mail: cpdalphapharm@insightmed.co.za. Or see the website above.

2021 ENROLMENT FORM

Title: Name: Surname:

ID. No./Passport No.

Postal Address:

..... Code:

Tel. No. (.....) Cell: Fax: (.....).....

E-Mail:

Name of Pharmacy:

Language preference for modules English ☐ Afrikaans ☐

If you receive deliveries from an Alpha Pharm Wholesaler and would like to receive your modules together with your orders please indicate the name and address of your Pharmacy and the Wholesaler.

Pharmacy name and address.....

Alpha Pharm Wholesaler.....

Fees

Alpha Pharm Retail Marketing Members: Pharmacy Name: Free of charge ☐

Front shop pharmacy assistants: R2 545 (incl. VAT) ☐

Other Southern African Countries (VAT exempt): R2 520 (includes postage) ☐

Payment Methods

EFT or Direct deposit into Pharmaceutical Society of SA bank account:

Standard Bank, Lynnwood Ridge Branch Code: 051001, Account Number: 013 045 148

Fax copy of deposit slip together with registration form to the PSSA at 0866 159 835 or email to adl@pssa.org.za.

RETURN TO PSSA via email: adl@pssa.org.za or fax to 0866 159 835



**THE PSSA / ALPHA PHARM DISTANCE LEARNING
PROGRAMME FOR PHARMACISTS – 2021**

This CPD programme has been developed and administered by Insight Medicine Information, a provider approved by the SA Pharmacy Council. Continuing Professional Development (CPD) is a legal obligation for all pharmacists in 2021 in order to continue to practice. Our CPD programme will greatly help you to meet your regulatory requirements, improve your knowledge and enhance your professional service.

We plan to continue with our highly acclaimed approach providing you, the pharmacist, with useful, practical up-to-date information that will enable you to provide quality pharmaceutical care to your patients. The subjects for 2021 will include Understanding Cannabis, Covid-19, Hormonal Contraception, Chemotherapy Advances and an Update on Hypertension as there are exciting new developments in some of these areas.

The PSSA/Alpha Pharm Distance Learning Programme consists of a series of 5 study modules on different subjects, which are dispatched at 2 monthly - intervals. Each module is accompanied by a multiple choice question paper and an answer postcard. The postcards are returned for evaluation and your results posted to you together with an answer and analysis sheet. Successful participants who pass 4 of the 5 modules receive a certificate at the end of the programme. The programme is also now available online on the website <https://www.insightcpd.co.za>.

To register for 2021 simply fill in the enrolment form below and return it as soon as possible to the PSSA by fax on 0866 159 835 or email adl@pssa.org.za. For registration queries contact (012) 470 9562.

For further information regarding the modules contact Glynis or Gill on tel. (011) 706-6939, fax 086 660 9527, cell 083 601 4567 or e-mail: cpdalphapharm@insightmed.co.za or see the website above.

2021 ENROLMENT FORM

Title: Name: Surname:

ID. No./Passport No.

Postal Address:

..... Code:

Tel. No. (.....) Cell: Fax: (.....)

E-Mail:

Pharmacist ☐ Pharmacist's assistant ☐ Intern ☐

SAPC Reg. No. PSSA no.

Language preference for modules English ☐ Afrikaans ☐

If you receive deliveries from an Alpha Pharm Wholesaler and would like to receive your modules together with your orders please indicate the Name and address of your Pharmacy and the Wholesaler.

Pharmacy name and address.....

Alpha Pharm WholesalerAccount number.....

Fees

Alpha Pharm Retail Marketing members: Pharmacy Name:	Free of charge	<input type="checkbox"/>
Pharmacists – PSSA members:	R2 900 (incl. VAT)	<input type="checkbox"/>
Interns / Pharmacist's Assistants - PSSA members	R2 450 (incl. VAT)	<input type="checkbox"/>
Non-members (pharmacists, interns, pharmacist's assistants):	R3 700 (incl. VAT)	<input type="checkbox"/>
Other Southern African countries:	R3 000(VAT exempt)	<input type="checkbox"/>

Payment Methods

EFT or Direct deposit into Pharmaceutical Society of SA bank account:

Standard Bank, Lynnwood Ridge Branch Code: 051001, Account Number: 013 045 148

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COVID-19 TESTS - which ones to use when?

Jacqueline van Schoor - Amayeza Medical Writer

Access to reliable and accurate diagnostic tests plays a major role in the management of the current COVID-19 pandemic. In order to reduce transmission, morbidity and mortality, it is vital to be able to identify infected individuals, trace their contacts and apply isolation and quarantine measures.

There are a number of different types of tests that are currently available, and we are likely to have access to even more in the near future. It is important to be aware of what the different tests are, when they should be used, what samples should be collected and how to interpret the test results. Some tests are performed in laboratories and some can be done at point-of-care.

To be able to understand the relevance of the different tests, it is necessary to know more about the virus, the disease, its transmission and the immune system. The SARS-CoV-2 virus is a coronavirus that has four important protein structures (antigens) that are targets for the diagnostic tests.

- The spike protein (allows entry into the cells)
- Nucleocapsid protein that surrounds the genomic RNA
- A membrane protein
- An envelope protein.

It is thought that antibodies to the spike protein will provide immunity.

The mean incubation period is five days, with a range of 2-14 days. Transmission is primarily via respiratory droplets or fomites, with viral shedding peaking on or just before the onset of symptoms. Viral loads decrease thereafter. It is now widely recognised that asymptomatic individuals can also transmit the virus.

Antibodies are proteins that are produced by the human immune system in response to an infecting pathogen, in this case, the coronavirus SARS-CoV-2. These antibodies are found in the blood and play a role in destroying the virus. The production and appearance of them is the end product of a complex process that takes time to develop after the infection occurs. Antibodies have not yet developed when the virus first infects an individual. So, even when a patient has symptoms, the antibody test will be negative.

There are two main antibody types which appear and disappear at different time points:

- * IgM antibodies appear first, usually 7-10 days after infection and disappear again after weeks to months;
- * IgG antibodies appear second, usually about two weeks after infection, and usually persist for longer, and in some infections, for life. This does not however mean that they will necessarily become immune to reinfection. Most, but not all, infected patients will seroconvert. It is thought that 5-10% of people may never seroconvert.

THE DIFFERENT TESTS

Nucleic Acid tests

These are the cornerstone of the acute diagnosis of COVID-19. They detect the presence of the genetic material (RNA), called nucleic acids, of the actual SARS-CoV-2 virus, in respiratory tract specimens. These tests are known as RT-PCR (Real Time Reverse Transcriptase Polymerase Chain Reaction) assays. Such tests are good at detecting the virus early in the infection and can sometimes even detect the virus in a person before they become unwell (see figure below). In some cases, the viral RNA can be detected for up to 2 weeks after symptoms have resolved, but this does not necessarily mean that there is infectious virus present. There are both laboratory-based and point-of-care nucleic acid tests. These tests should primarily be used to diagnose current infections in people who are symptomatic, early on in their illness. The sample type is usually a nasopharyngeal or deep nasal with throat swab, depending on the actual test being used, but some tests are now able to use saliva and is therefore less invasive. These nucleic acid tests are expensive and results can take days, risking that the patient may have been negative at the time of the sample being taken, but positive by the time the result is returned.

Laboratory-based antibody tests

These are usually designed to detect antibodies to the spike protein or the nucleocapsid protein. As antibodies only start to appear in blood after the first week of infection (see figure below), and are only meaningful from

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10-14 days, these tests are not used for diagnosis of acute infections. They are used to diagnose past infections and should only be done at least 14 days after onset of symptoms. Serum from a sample of blood is used. They are not helpful to guide decision-making regarding patient management, decisions regarding the need for quarantine, isolation or contact tracing.

Point-of-care antibody tests

These tests also detect antibody levels: IGM, IGG or both. Although they have the advantage of being easy to use, being finger-prick blood tests, and providing a rapid turnaround time, their sensitivity is not as good, and as with the laboratory antibody tests, they do not detect acute infections and should only be used at least 14 days after onset of symptoms to diagnose past infections. These antibody tests are not intended for self-testing. They are designed to be used under the direct supervision of a health care professional. It is important to realise that these rapid test kits cannot be used to clinically diagnose COVID-19 cases, but they may play a role in research, epidemiological as well as sero-surveillance studies. Rapid test kits are not recommended by the WHO for clinical diagnosis of SARS-Cov-2 infection.

The tests have false-negative results, so a negative test does not reliably rule out prior infection. Antibodies wane over time, and this may happen within 1-2 months in asymptomatic or mild cases. Likewise, they can give a false-positive result. The detection of antibodies may also not correlate with immune protection, and therefore a positive result should not be regarded as proof of immunity.

The majority of studies have been done in a hospital setting. It is therefore not known whether these tests will work in patients with mild or asymptomatic infections.

Note: all results of all antibody testing conducted must be recorded and reported to the National Health Laboratory Services, utilising the appropriate application (found at: <https://csa.nhls.ac.za>)

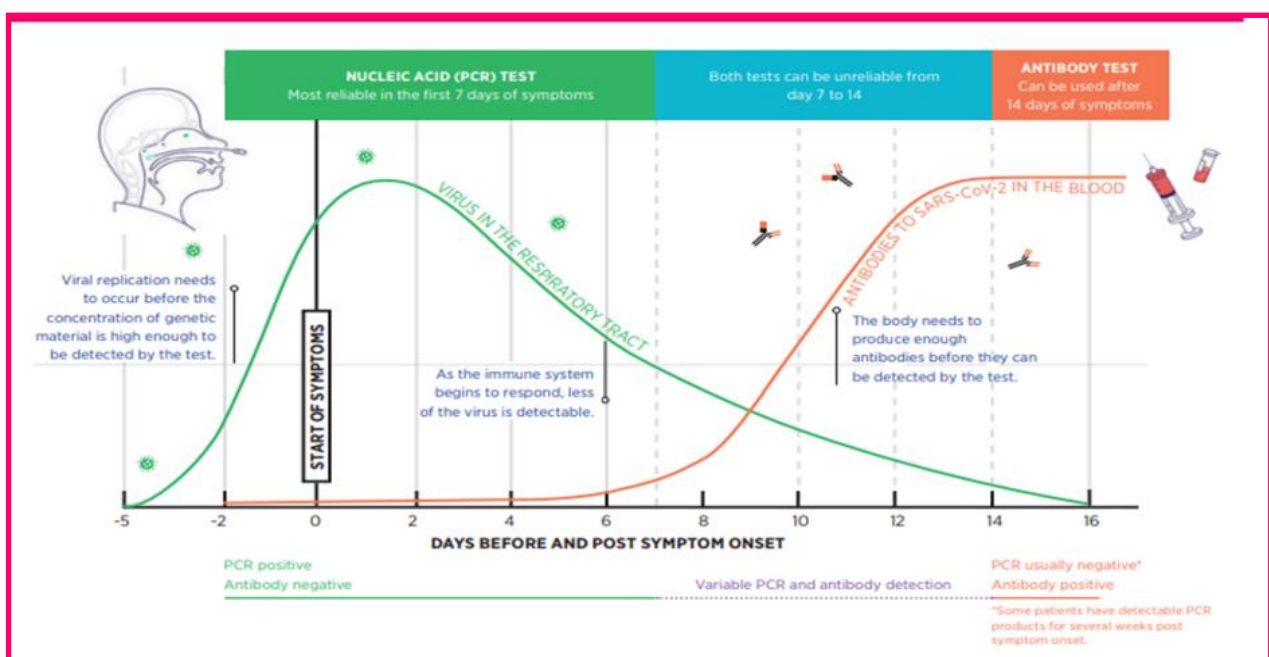
Antigen tests

These detect the actual proteins that are expressed by the virus. They usually detect the nucleocapsid protein in respiratory samples. They detect acute infections, usually in symptomatic patients within five days of onset of symptoms. They have not been tested on asymptomatic people as yet. These tests have a rapid turnaround and are less costly, but are not as sensitive as PCR. Positive results are highly accurate but there is a high chance of false-negative results, putting the community at risk.

The choice of which test to use therefore depends on the clinical presentation and stage of the illness and what one is trying to achieve.

It is well-recognised that false-negative results can have a serious effect on combatting the pandemic, as it puts the community at risk, with an infected person not isolating, and may deprive the patient from much-needed treatment. False-positive results can, however, also have serious consequences such as unnecessary isolation from family and work or school and may prevent the individual unnecessarily from traveling, not to mention the emotional toll.

Correlation between viral load, antibody production, diagnostic window and clinical course of SARS-CoV-2 infection^{Ref}



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CONCLUSION

The RT-PCR tests are currently the best tests to diagnose patients infected with SARS-CoV-2, but turnaround times are not optimal. Antibody tests assist in finding out who has had COVID-19 in the past, but they cannot tell whether the patient will now be immune to future SARS-CoV-2 infections. A negative test may also not rule out the possibility that the patient had COVID-19, as it depends when the test is done in relation to the symptoms.

To quote Admiral Brett Giroir, MD, assistant secretary for health in the Trump administration,

“Testing does not substitute for avoiding crowded indoor spaces, washing hands, or wearing a mask when you can’t physically distance. Further, a negative test today does not mean that you won’t be positive tomorrow.”

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Avoid the Three Cs

Be aware of different levels of risk in different settings.



There are certain places where COVID-19 spreads more easily:



Crowded places

with many people nearby



Close-contact settings

Especially where people have close-range conversations



Confined and enclosed spaces

with poor ventilation



The risk is higher in places where these factors overlap.

Even as restrictions are lifted, consider where you are going and #StaySafe by avoiding the Three Cs.

WHAT SHOULD YOU DO?



Avoid crowded places and limit time in enclosed spaces



Maintain at least 1m distance from others



When possible, open windows and doors for ventilation

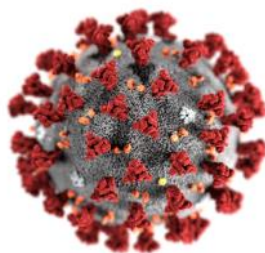


Keep hands clean and cover coughs and sneezes



Wear a mask if requested or if physical distancing is not possible

If you are unwell, stay home unless you need to seek urgent medical care.





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