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SCHOOL OF CLINICAL MEDICINE NEWSLETTER

EDITORIAL

Dear Colleagues

Spring is here, with a promise of renewal and better things.

This is day 528 in the state of disaster during the COVID pandemic. South Africa has recorded 2 819 945 cases of COVID -19and 83 419 COVID -19 related deaths. The actual death toll due to COVID-19 is probably closer to 250 000. We have lived through three COVID-19 surges and another is predicted in November / December? What can we do to prevent this? The non- pharmaceutical measures of social distancing, wearing masks and regular sanitizing remain important, but the only way to stop the pandemic is through mass vaccination. Severe COVID disease, including ICU admissions and death, are significantly reduced by vaccination, as well as the transmission of the virus to others. Everyone should get vaccinated, not only to protect themselves, but also to protect others. Vaccine hesitancy is a big challenge – there is a great deal of misinformation and fake news spread on social media. The only way to overcome COVID-19 is through vaccination. So far, 13 454 823 South Africans have been vaccinated, almost 23% of the total population. All adults are now eligible to be vaccinated. Wits, in collaboration with Netcare, has established a vaccination site on main campus. Don't hesitate, vaccinate! This way we can return to a more normal way of life.

Prof Daynia Ballot (Head of School)

A LOOK AT OUR STAFF ACHIEVEMENTS

Promotions:

Congratulations to Dr Ann George with her promotion to Senior Lecturer

Congratulations to the following staff with their appointments::

Prof Yasmin Adam Acting Head for the Department for Obstetrics and Gynaecology

Academic Divisions Heads:

Dr Manoko Seabi – Gastroenterology (Internal medicine)

Dr Duvern Ramiah – Radiation Oncology

Dr Indhrin Chetty – Forensic Psychiatry

Prof Corna Smith – Psychology

Dr Sandra Fernandes – Neuropsychiatry

Dr Venera Stancheva – Child & Adolescent Psychiatry

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Welcome to:

Honorary Lecturer

Dr Jacqui Venturas

Dr Jaleelat Momodu

Dr Anita Pui Ching Lai

Dr Gary Peiser

Dr Mvuyiso Talatalal

Dr Gregory Jonsson

Dr Carina Marsay

PROF YASMIN ADAM

Prof Adam qualified as a specialist in 1995 at the University of the Witwatersrand (Wits), after obtaining a BSc (University of Durban-Westville) and an MBBCh (Wits).

She was then able to pursue a second passion and obtain a MSc (Biostatistics & Epidemiology) from Wits.

Most of her practice has been in public service, with a short time in private practice as a GP and also as a specialist. She has been the Clinical Head in Obstetrics & Gynaecology at Chris Hani Baragwanath Academic Hospital since 2013.

She enjoys teaching and training and have been involved with undergraduate (UG) and post-graduate (PG) teaching. She also teaches clinical associates, nurses, midwives, GP's and various Masters students. This includes lectures, tutorials, bed side teaching and surgical skills. She has convened workshops in contraception, colposcopy and research. She is also an internal and external examiner for PG and UG students and have examined MMed's, MSc's, College dissertations and Diploma's (Obstetrics and HIV/Sexual Health).

Research endeavours include her own research, MMed, MSc and student research project supervision. She has supervised at least 30 MMeds, and have done over 40 journal reviews. She has published (20 articles and 2 chapters). She attended several research workshops and also been involved in convening research workshops. She has served on DSMB for clinical trials, serve as an advisor in epidemiological research, and a member of the advisory board of the Research Centre for Maternal, Fetal, Newborn and Child Health Strategies, Faculty of Health Sciences, University of Pretoria. She also served on the post graduate assessors committee until 2017 and on the Ethics committee (2008-date).

Her clinical focus includes contraception, prevention of cervical cancer, cervical cancer, maternal morbidity and mortality, still births, neonatal encephalopathy and neonatal death. She contributed to the development of guidelines on Infertility options, the contraception manual and prevention of cervical cancer guidelines for the DoH. She serves on the CHBAH clinical review committee and chair the PPE committee. She has been an invited speaker to several conferences addressing these topics.

Medicolegal matters is important in Obstetrics & Gynaecology and she has been an expert witness, been involved in writing reports for the State and for SASOG. She serves on the advisory committee to mitigate risk and have done modules in Foundations on Health law and also Mediation.

DR MANOKO SEABI

Dr Seabi is a Consultant Physician and Gastroenterologist based at Charlotte Maxeke JHB Academic Hospital.

She qualified as a medical doctor in 2000 at the Sefako Makgatho University. She went on to specialise in Internal Medicine, qualifying as a Specialist Physician in 2006, and a Gastroenterologist in 2008.

Shortly after completing her training, she spent a number of years in the Gastroenterology units of University College London Hospital and Guys and St Thomas Hospitals in London, where she got valuable experience in Gastreoenterology and Endoscopy.

She heads the Gastroenterology Department at CMJAH, and a medical teaching unit at Wits Medical School where she is involved in the training of Gastroenterology Fellows and Medical students. Her main interests are in inflammatory bowel disease and endoscopy.

DR DUVERN RAMIAH

Dr Ramiah did his undergraduate degree in medicine at the University of the Witwatersrand where he graduated in 2002. After internship and community service in KZN, he returned to Charlotte Maxeke Johannesburg Academic Hospital (CMJAH) in 2005 to start as a registrar in the Radiation Oncology department. Upon graduating in 2008, he continued to work as a consultant in the department until 2011. He left CMJAH in 2011 to join his former head of department in private practice becoming a partner and director of the DMO oncology group and was based at Sandton Oncology and West Rand Oncology Centre. During that time, he chaired many multidisciplinary tumour boards and spoke regularly at various medical meetings. He became managing partner of their Sandton Oncology Unit in 2014.

Finding enjoyment in the managerial aspect of medicine, he decided to step away from clinical work in 2017 and do an MBA at one of the world's leading business schools - London Business School (LBS), currently number 2 in the Financial Times global MBA rankings. Finding, while at LBS, that his interests lay in entrepreneurship and public service, he went on to work with several private equity and venture capital funds on optimising their healthcare investing and investments, and during his returns to Johannesburg also started a private radiation oncology practice at Wits Donald Gordon Medical Centre. He co-authored and published articles with some of the leading radiation oncologists in the world. His special interests are in breast and prostate cancer radiation oncology, with a particular focus on hypofractionation and maximising this disruptive-innovations value-creation potential. More generally within healthcare, he has an interest in harnessing technology, such as Artificial Intelligence and Machine learning, in the drive towards precision medicine and restructuring healthcare ecosystems to embrace and maximally use technology to augment its work, rather than make its systems and the professionals within it, redundant.

He was appointed as Clinical Head of Radiation Oncology at CMJAH and took up the position in February 2021 and has subsequently been appointed as Academic Head of the Division of Radiation Oncology at Wits.

NEW PSYCHIATRY DIVISIONS

Dear Colleagues and Students

The Department of Psychiatry is pleased to see the establishment of 4 divisions:

- Child & Adolescent Psychiatry, (HOD) Dr Venera Stancheva
- Forensic Psychiatry (HOD Dr Indhrin Chetty)
- Neuropsychiatry (HOD Dr Sandra Fernandes)
- Clinical Psychology (HOD Prof Cora Smith)

Subspecialty training as well as teaching and training; research and psychotherapy supervision for registrars in the department; and inputs on discipline specific areas for all undergraduate students (GEMP 2,3 and 4, OTs for example) in the SOCM will no doubt be enhanced by the 4 HODS. Congratulations and wishing you all the best!

Prof Ugash Subramaney, Head of Department, Department of Psychiatry

DR INDHRIN CHETTY

Dr Chetty is a registered Forensic Psychiatrist. He is attached to the Forensic Neurosciences Unit at Sterkfontein Psychiatric Hospital, Krugersdorp.

He also holds a LLB degree and is passionate about animal rights.

He is the Chairperson of the Forensic Psychiatry special interest group at SASOP, which is the SA Society of Psychiatrists.

PROF CORA SMITH

Prof Smith is an Adjunct Professor in the Division of Psychology in the Department of Psychiatry at the University of the Witwatersrand.

She also holds a joint appointment post as the Chief Clinical Psychologist at Child, Adolescent and Family Unit, Johannesburg Hospital.

She runs the CAFU Family Therapy Programme and teaches Trauma Counselling and Individual Psychotherapy with children, adolescents and parents.

Her interests are in the development of personality pathology through the life cycle with a particular focus on attachment. She has a keen interest in the ethical dilemmas that emerge in clinical practice.

She is responsible for the training of MA Clinical Psychology Interns, as well as training of Child Psychiatry Specialists, Neuro-developmental Paediatricians and Psychiatric Registrars in psychotherapy.

Prof Smith holds a Masters in Clinical Psychology and a PhD from the University of the Witwatersrand.

She currently serves on the Human Ethics Research Committee at the University of the Witwatersrand. She previously served on the Ethics Advisory Subcommittee of the S.A. School Psychologist's Association, the Ethic's Advisory of Educational Psychologists of SA and the Ethics Advisory Committee of the South African Psychoanalytic Confederation.

She is the co-editor of the book Psychodynamic Psychotherapy in South Africa: contexts, theories and applications.

DR SANDRA FERNANDES

She is a Wits graduate (1996), psychiatrist since 2002 and employed at Tara since 2004. She is a registered neuropsychiatrist subspecialist with the HPCSA since 2016.

She has managed a specialist neuropsychiatric ward and an outpatient clinic. She is currently managing Lufuno, Tara's neuropsychiatric/HIV clinic. She has been involved with undergraduate teaching since 2002, and am an examiner for the part II CMSA exams.

From March 2020, she has set up policies and protocols for COVID-19 management of patients and staff at the hospital. She set up a designated COVID-19 ward for psychiatric inpatients, providing oxygen/CPAP and treatment protocols as per CMJAH. During this time she has completed courses on respiratory support for COVID-19 patients as part of upscaling her skills. She has been managing two isolation wards for PUI's and one COVID-19 ward.

They have managed mild-moderate COVID-19 disease with comorbidities and psychiatric illness. She is the Chair of the surveillance hospital COVID-19 committee and co-chair of the Tara COVID-19 response committee.

She also chairs the PILIR committee and responsible for making recommendations on alternative accommodations for staff with comorbidities during this pandemic.

She has managed the Tara Vaccination committee in preparation for the hospital to open up as a designated vaccine site.

DR VENERA STANCHEVA

Dr Venera Stancheva completed her medical degree in Bulgaria in 1990. She emigrated to RSA in 1995. She initially worked as a Medical Officer in Botswana before moving to SA where she worked as a medical Officer in different medical departments at Charlotte Maxeke Johannesburg Academic Hospital and CH Baragwanath Hospital until full registration with HPCSA was obtained.

Dr Stancheva completed her psychiatry training in 2012 thereafter qualified and registered as a subspecialist in Child and Adolescent Psychiatry (2016). She is actively involved in the teaching and supervision of students, medical officers, registrars and subspecialist trainees.

She is the current Head of the Child, Adolescent and Family Unit at CMJAH, where she is passionate about treating children and adolescents, particularly those with challenging psychiatric conditions and assisting their families to manage them more effectively in the home environment.

Increased consultation liaison with the Department of Paediatrics and Paediatric Surgery has developed under her leadership and the unit has well developed academic and outreached programs aiming at maintaining a quality care for children and adolescents with mental health problems.

Dr Stancheva is often invited to speak at different forums, dealing with the increasing needs of children and adolescents with psychiatric conditions.

WITS JOURNAL OF CLINICAL MEDICINE

The Wits Journal of Clinical Medicine is a peer-reviewed, Open Access scientific research journal published triennially, and was established to provide a forum to showcase scientific research from the School of Clinical Medicine at the University of Witwatersrand, Johannesburg as well as from other institutions nationally and internationally. Please note that Volume 3, Number 2, July 2021 is now available online.

The Wits Journal of Clinical Medicine is now PUBMED Central accredited!

Submissions are welcomed and the journal has a particular focus to encourage clinical and translational research especially from new academics, including students, registrars, fellows and junior consultants.

The Wits Journal of Clinical Medicine also provides a space where the various Departmental Research Day abstracts can be shared.

WJCM publishes original papers, review papers, case reports and letters to the editor. Send your manuscript to: rita.kruger@wits.ac.za

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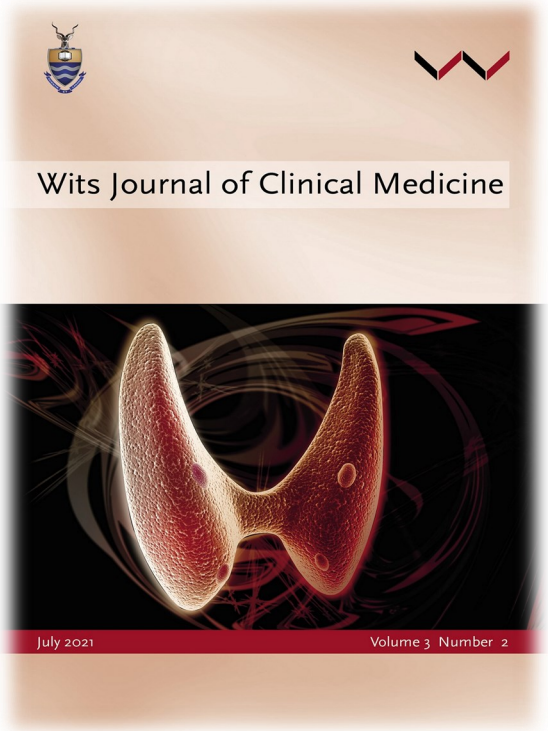
Prof Pravin Manga
(Editor)



PPE DONATION

Thank you to Melu Lawrence (Sanlam Marketing) , Steve Moir (Abacon Blue Star), Selmie Harris (Abacon Blue Star) and Jason Du Plessis (Abacon Blue Star) for the PPE donation to the School of Clinical Medicine that took place on Wednesday 4 August 2021. The donation helps us in the critical fight against the COVID-19 pandemic.

Our gratitude to all involved.

From L to R: Mr Steve Moir, Mr Jason du Plessis, Ms Selmie Harris, Mr Scott Smalley, Prof Daynia Ballot & Dr Anastasia Ugwuanyi

From L to R: Mr Jason du Plessis, Ms Christina Raxenidis (GEMP 4 Student), Ms Selmie Harris & Mr Steve Moir

From L to R: Prof Daynia Ballot & Ms Melu Lawrence

RESEARCH ENTITIES IN THE SCHOOL

Effective Care Research Unit

Brief History

The Effective Care Research Unit (ECRU) was established in 1988 as a formal Wits research unit, led by Justus Hofmeyr, then head of Obstetrics and Gynaecology at Coronation Hospital.

In 2000 ECRU relocated to the Frere and Cecilia Makiwane Hospitals in East London, Eastern Cape, to focus on improving care in low-resource settings. Prof Hofmeyr was employed as a clinician at the hospitals and retained an honorary appointment as visiting professor at Wits, and ECRU is situated within the Department of Obstetrics and Gynaecology, School of Clinical Medicine.

In 2020 Prof Hofmeyr was appointed as Professor at the University of Botswana, while continuing as Co-Director of ECRU, together with Dr Mandisa Singata-Madliki, who joined the staff of ECRU in 2001. In 2021 Dr Singata-Madliki was appointed Executive Director of ECRU, with Prof Hofmeyr as Associate Director.

Research Strategy

The research strategy of ECRU has been to strive to improve outcomes for mothers and their babies in low-resource settings through a systematic process:

Identifying major causes of mortality and morbidity

Conception of novel innovation

Conducting systematic reviews of relevant interventions

Where evidence was lacking, conducting primary clinical research, mainly by means of randomized clinical trials

Promoting implementation through participation in World Health Organization (WHO) guideline development

Research capacity development

Impact of Research and Innovations

Working in collaboration with local and international colleagues, ECRU innovations and research have had demonstrable impact on health care nationally and globally

Led a research program which discovered the major effect of supportive companionship during childbirth on labour outcomes and the mothers' psychological health and mother-child relationship; now promoted globally and highlighted in the new WHO recommendations: Intrapartum Care for a Positive Childbirth Experience.

Pioneered research on external cephalic version at term, for breech presentation, now included in national and international guidelines

Conceived the theory that delayed cord clamping may reduce periventricular haemorrhage in preterm babies and conducted the first clinical trial – now widely validated as life-saving, and adopted (including in WHO guidelines)

Conceived the buccal/sublingual route of misoprostol administration for treatment of postpartum haemorrhage – now included in WHO guidelines

Conceived a novel method of 'titrated oral misoprostol solution' for labour induction, now used in many countries globally and included in WHO guidelines

Conceived a model of on-site primary care midwife obstetric units, implemented at Dora Nginza Hospital and Frere Maternity Hospital and being taken up in several countries.

Discovered a novel method to overcome shoulder dystocia 'posterior axillary sling traction', , now taken up and taught in several countries.

Conducted primary research and Cochrane systematic reviews which have guided national and international clinical guidelines such as calcium supplementation for preventing pre-eclampsia.,

Conducted the first randomized trial of the effect of hormonal contraception on HIV acquisition, and participated in the large

Calcium and pre-eclampsia Trial steering committee meeting (from front row left): Mandisa Singata-Madliki (ECRU), Stephen Munjanja (Zimbabwe), Eduardo Bergel (Argentina), Simpiwe Mose (Chris Hani Baragwanath Hospital), Armando Seuc (Cuba), Gabriela Cormick (Argentina), Sue Fawcus (Universty of Cape Town), Alvaro Ciganda (Argentina), Jim Roberts (University of Pennysylvania), Ana Pilar Betran (WHO), Justus Hofmeyr (ECRU)

ECHO trial on this topic.,

Current Research

Suction Tube Uterine Tamponade

ECRU has conceived and developed a novel method of Suction Tube Uterine Tamponade for treatment of postpartum haemorrhage unresponsive to medical treatment, using an inexpensive, widely available Levin suction tube, and published a proof-of-concept study and early clinical experience with this method. The effectiveness and safety is being compared with the current standard of care (uterine balloon tamponade) in a randomized capacity-building clinical trial at 10 sites in the Eastern Cape, Free State, Kwazulu Natal and Gauteng, including Chris Hani Baragwanath Hospital. The manuscript of the internal pilot study has been submitted for publication. We are also providing technical support for a large WHO trial of the device in Vietnam.

E-MOTIVE Study

ECRU is leading the South African participation in an international cluster randomized trial led by WHO and University of Birmingham to test a quality-of-care intervention to improve outcomes for women with postpartum haemorrhage. Collaborators are Prof Sue Fawcus, University of Cape Town, and Dr Neil Moran, Kwazulu-Natal Department of Health.

Blood loss monitoring device

The BLMD is an innovative, re-usable receiver for monitoring blood loss after birth, which is being developed in collaboration with Equalize Health, a not-for-profit health technology company based in California, US, and Sinapi Biomedical based in South Africa. A preliminary acceptability study by Dr Singata-Madliki has been published in International Journal of Gynaecology and Obstetrics.

Individual Participant Data meta-analyses

ECRU Research Methods Course participants, 2006

ECRU is collaborating with international groups to utilize data from prior ECRU randomized trials in IPD meta-analyses on calcium supplementation for preventing pre-eclampsia (iCIP Study) and delayed cord clamping for reducing mortality in preterm babies (ICOMP Study).

Step-Mag study

ECRU is collaborating with WHO and University of Pretoria on a multicounty study of a simplified regimen of Magnesium Sulphate for pre-eclampsia

CHAMPION 2 Trial

Collaborating with WHO on an international randomized trial of Heat stable carbetocin for treatment of postpartum haemorrhage.

Research capacity-building

Supervised 9 successful PhD candidates

In-service training of research midwives

Run annual research methods courses funded by WHO in East London 2001 - 2015 – attended by over 300 prospective researchers from South Africa and other African countries.

Funding and support

Most of ECRU's support has been the result of collaboration with the WHO, including a Long-Term Institutional Development Grant, training grants for Research Methods Courses, and participation in many large-scale WHO-sponsored clinical trials. Support has also been received though the Universities of British Columbia and Birmingham, grantees of the Bill& Melinda Gates Foundation; the New venture Fund, and the SA MRC. The SA MRC also awarded a 5-year research capacity development grant to Dr Singata-Madliki for the COHERE Project.

Research outputs

Peer-reviewed journal publications: 370 (13 in 2020)

Book chapters: 31 (3 in 2020);

Audiovisual teaching programmes in the WHO Reproductive Health Library: 9

Recent awards (2020)

John J Sciarra Prize for the best LMIC publication in the International Journal of Gynecology and Obstetrics during 2019.[18]

Current ECRU staff:

Most research staff are temporary appointments funded by specific research grants

Executive Director: Mandisa Singata-Madliki

Associate Director: G Justus Hofmeyr

Data Manager: Elani Muller

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Singata-Madliki M, Hofmeyr GJ. A novel, reusable 'Safe birth Tray' for postpartum blood loss monitoring: A preliminary acceptability assessment. Int J Gynaecol Obstet. 2021 Jul 6. doi: 10.1002/ijgo.13817. Epub ahead of print. PMID: 34227106

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https://www.matchresearch.co.za/

Established in 2013, MRU (Maternal, Adolescent and Child Health Research Unit) aims to answer priority questions that will translate into improving sexual and reproductive health outcomes through expanding access to appropriate and acceptable contraceptive, HIV prevention and related health technologies and services. MRU is affiliated to the Department of Obstetrics and Gynaecology in the Faculty of Health Sciences and is based in eThekwini, Durban.

Our core research areas are contraception including barrier methods, HIV prevention, safer conception, menstrual management, postpartum depression and other areas of sexual and reproductive health. MRU engages in pivotal research conducted with vulnerable populations, including youth, sex workers, drug users and residents of informal settlements. Our research is carried out at our site in Durban and in the surrounding communities and health facilities.

Using a range of methodologies, we conduct behavioural, operations and clinical research, actively partnering and involving communities and local structures. We also provide technical assistance, partnering with various stakeholders including the Department of Health and other NGOs to effect policy change and enhance best practice. We work with diverse partners, laborators and donors, including local and internationally based universities and research centres.

Our team consists of highly skilled research, clinical, laboratory, community, data and administrative staff from a wide range of backgrounds including clinical, behavioural and social sciences.

Research Portfolio: Highlights of our current studies by key focus area:-

HIV Prevention

Our current programme of work in Pre-exposure prophylaxis (PrEP) for HIV Prevention. Includes a ground breaking study which is being carried out in collaboration with the University of Alabama. This five-year NIH grant was awarded for the *Zivikele ngaphambi kokukhulelwa* (ZINK): Protecting yourself before pregnancy study offered PrEP as part of a safer conception package.

Analysis and dissemination continued on a completed NIH funded study - Siyaphanta, Siyavimba! Which explored female sex workers' (FSW) knowledge, attitudes, and experiences with pre-exposure prophylaxis (PrEP) and treatment as prevention (TasP), and other prevention options.

Several new PrEP studies are in the planning phase with one "*Impower*" https://www.avac.org/trial/impower-022) due to start fieldwork shortly and Purpose1 (https://www.gilead.com/news-and-press/company-statements/gilead-announces-new-arm-of-hiv-womens-prevention-study to commence later this year.

A successful seed application for a joint collaboration with researchers at Queens University, Belfast was awarded in 2020 to MRU. This study is exploring women's preferences and attitudes to different vaginal ring product attributes.

We conducted a national on-line condom perception survey to assess user knowledge, attitude and perceptions of the public sector male and female condoms - Max and Maxima.

We are conducting a condom functional performance study with two new male condoms.

Maternal health in HIV positive women

We completed enrolling in our NIH funded study - PEPEHC (Evaluation of Postpartum Engagement in HIV Care) which aims to estimate the rate of attrition from HIV care and to identify factors associated with attrition from and retention in HIV care during the postpartum period. The study enrolled 473 currently pregnant women, living with HIV and currently pregnant.

The ZINK study team

Participants are followed up over a period of two years. An additional COVID component was added to assess the impact of the pandemic on study participants in HIV care.

We are collaborating with the Wits Clinical HIV Research Unit in an NIH funded study looking at the acceptability of combination treatment for cervical precancer in South African women living with HIV. MRU is involved in supporting the qualitative component of the formative Research for this study.

Contraception

We continued to write up the results of the ECHO Trial (The Evidence for Contraceptive options and HIV Outcomes). This trial compared the risks of HIV acquisition between women randomised to Depot Medroxyprogesterone Acetate (DMPA), Levonorgestrel (LNG) implant, and copper IUDs. Additionally we followed up a sample of 434 women who completed the ECHO trial in a new study:- CUBE: Contraceptive use dynamics beyond the ECHO trial: This study assessed long-term (24 months) user experiences and method continuation. An additional COVID component was added to assess the impact of the pandemic on uptake and continuation of contraception.

Our condom research programme includes a female condom contraceptive efficacy study- the CoCo study. Women were randomized to one of three female condom types and the study will shortly complete data collection.

Key Populations

The HIDE study:- Hidden Epidemic: Using respondent-driven sampling to engage people who inject drugs in South Africa into the HIV continuum. This study aims to understand the HIV prevention and treatment needs of this population and how to better engage them into care. It will employ qualitative methods to assess access to and acceptability of HIV prevention and treatment services among People Who Inject Drugs (PWID) in KwaZulu-Natal.

Menstrual management

Our menstrual management programme continued through 2020, with menstrual cup education and distribution activities in eThekwini schools and an evaluation of menstrual health management in female learners in KwaZulu-Natal, Eastern Cape and Gauteng.

MRU continued to provide support to the Provincial and National Departments of Health (DoH) (SRH) in policy and programme issues in the area of sexual and reproductive health.

In 2020 MRU published 24 articles in peer - reviewed journals and presented our work at a range of virtual international conferences and meetings. Recent high Impact publications:-

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EVERYTHING YOU NEED TO KNOW ABOUT VACCINES — OUR ONLY VIABLE STRATEGY FOR LIVING WITH COVID-19

27 July 2021 - Lucy Allais, Shabir Madhi, Imraan Valodia, Alex van den Heever, Martin Veller and Francois Venter

We are likely to keep being hit by further waves of this virus until at least all adults have immunity.

Our only hope for getting the pandemic under control is for as many people as possible to be vaccinated against it as quickly as possible.

Most importantly:

- Vaccines will give you near-complete protection against severe illness and dying from Covid.
- Vaccines are safe. All vaccines used in the vaccination programme in South Africa have undergone extensive trials and have been proven to be effective and safe.
- The risk of serious side effects is similar to the chance of being struck by lightning, and side effects are treatable and generally go away on their own.
- It takes time for vaccines to start working well — usually about two weeks, and their working steadily improves after this.

Vaccines differ in how well they protect against infection and mild Covid. Most vaccines will require at least two doses and provide good protection against severe illness from Covid *two weeks after your first shot.* Until you are fully vaccinated you should continue to take the same precautions as if you are unvaccinated.

Vaccines are our best hope in fighting Covid.

Having caused at least four million recorded deaths worldwide, and probably almost 200,000 excess deaths in South Africa (the official figure of 65,000 almost certainly understates the true picture, which is more accurately indicated by what is called “excess mortality”), the Covid pandemic is one of the worst in history.

After 18 months of worldwide infection and deaths and with 10-15% of survivors experiencing the unpleasant “long Covid” symptoms, as well as severe social, economic, and educational disruption, it is clear that the novel coronavirus, SARS-CoV-2, which

causes Covid-19, is not going to go away. But, as terrible as the pandemic has been, the good news is that a number of very effective vaccines have been developed.

As we can see from the devastating third wave South Africa has been reeling under, we are likely going to keep being hit by further waves of this virus that will cause further unnecessary suffering and death until at least all adults have immunity. Our only hope for getting the Covid pandemic and its severe health, social and economic consequences under control is for as many people as possible to be vaccinated against it as quickly as possible.

How do vaccines work?

Our bodies have many processes that detect and fight infection and disease: together these are called the immune system. When our bodies become infected, some cells figure out how to fight the infection, and if they are successful, and we survive, our bodies develop the memory of how to produce these cells that know how to fight this specific infection, usually far more efficiently and speedily the second and subsequent time round. This is called immunity.

Vaccinations are a way of triggering the body to develop an immune response to a particular disease without having to actually get the disease — a kind of fake first infection.

Traditionally, vaccines contain a component of the virus or other microorganism, or the organism in a weakened or killed state. The body then is able to recognise the virus when we are infected and respond to it, as if it was exposed the first time. The most recent mRNA technology, which is used in some of the latest vaccines, uses genetic material that tells our bodies to produce a protein of the virus which then stimulates the immune response.

Vaccines are one of the most successful, and safest, interventions medicine has ever come up with. They have eradicated dangerous infectious diseases such as smallpox, have controlled polio, and have saved billions of lives from measles, tetanus, pneumonia, hepatitis and diarrhoea. They have dramatically decreased viruses responsible for some cancers. They are also safe — bad side effects are very rare and the risk of developing severe illnesses is much smaller than the bad effects of the diseases the vaccines prevent.

Vaccines were not invented by Big Pharma and they are not unique to Western medicine — the first recorded use of something similar to vaccination was in China in the 16th century.

Will I immediately have protection?

No. Immunity takes time to build up in the body.

For most Covid vaccines it takes at least two weeks after the vaccine has been administered for you to start developing immunity. Most vaccines will start providing some protection against severe illness two weeks after the first dose. However, good protection generally requires at least two doses of the vaccine, and will start materialising 7-14 days after the second dose.

All vaccines work very well against severe Covid, irrespective of the variants (different versions of the virus) that are circulating. They differ in how well they protect against infection and mild Covid (usually sniffles, tiredness and other flu-like symptoms).

At the moment, two vaccines are being used in SA — both excellent choices.

The J&J is being used as a single shot; the Pfizer as a two-dose schedule, several weeks (minimum three weeks) apart. Other excellent options, mostly two-shot, are being evaluated. Don't stress about which one is best — the best one is the first one you can get.

Even though you have had a vaccination, you should continue to act as if you do not have immunity until three weeks after your first (J&J) or second shot (Pfizer).

Do not assume you have enhanced immunity straight after getting your jab. Continue to take precautions. Mask when indoors with people and always open windows in rooms and vehicles.

We have seen many people get sick in those two weeks while waiting for their immunity to kick in, either infected just before or after their shot.

How safe are you once you are fully vaccinated?

All the vaccines currently in use give excellent protection against severe illness and death — they keep you out of hospital and off a ventilator.

We have less good information on how likely you might be to get a mild infection of Covid, and it is possible that you could get infected. We have seen many people get mild "breakthrough'' infections even after the full two weeks after vaccination. Often this will be so mild that you don't know you have it; some people get worse infections which can feel like a bad cold, but they usually recover after 2-3 days.

The possibility of being mildly infected means that when you are with people who are not fully vaccinated, you should continue to take precautions of masking, opening windows and avoiding being together indoors or in a vehicle, because you could infect those who are not protected. Even though it is possible to get Covid mildly

once fully vaccinated, *we now know that fully vaccinated people are less likely to spread the virus.* Also, vaccines will differ in how well they protect against infection and mild Covid, which also depends on which variants are circulating.

We are still learning how best to deal with these mild infections, especially with the new, hyper-transmissible Delta variant. It is possible we may need additional shots for better protection, whether of the same vaccine or a different one. Stay posted.

Should I expect side effects?

You may feel no effects at all. But side effects can include having a sore arm where you were injected, getting a headache, or having a fever, for a day or two. The side effects experienced are much milder than getting severe Covid (some of the authors have had this experience). Also, these side effects generally indicate that the vaccines are inducing an immune response and doing what they are meant to do.

Severe allergic reactions are very rare, but can occur after any vaccination; if they occur, the healthcare provider who administered the vaccine can immediately and usually effectively treat the reaction.

The Pfizer vaccine can cause an allergic reaction which is easy to treat, and very rarely can cause inflammation of the heart, which normally goes away quickly.

The J&J vaccine has a very rare effect of blood clotting, and can be serious; Covid causes this effect far more often, though, so the benefits far outweigh the risks. Recently, the J&J vaccine has been associated with a very rare syndrome causing weakness, called the Guillain Barre Syndrome. This syndrome is also seen in patients who have had the flu and other viruses, and is treatable.

Are there any people who should not get vaccinated?

No. But some people may not respond — not everyone's immune system learns equally well from vaccines.

People who have conditions involving immune suppression — for example, someone who has had an organ transplant and is taking immunosuppressant drugs to stop their body from rejecting the new organ, or people on chemotherapy or taking immunosuppressives for other condition like rheumatoid arthritis — may not develop as good immune responses from vaccines. We are learning, though, how to amend the doses so these people can get better protection — so watch this space.

In addition, people with severe allergies may want to avoid the Pfizer vaccine, or ensure that the person giving the vaccination is ready in case of a reaction.

What is the Delta variant? What is the story with these Covid variants?

Like all viruses, SARS-CoV-2, the virus which causes Covid, changes and develops. When a version develops that has important differences (for example, that increases its transmissibility, virulence or relative ability to evade immune responses), it is given a new label, such as the Delta version of Covid, which has been hitting South Africa hard.

The Delta variant is two-fold more infectious than the original SARS-CoV-2 virus, which is why it has been spreading so quickly. So far the vaccines are still working well in protecting against severe Covid due to variants, but vary in how well they protect against infection and mild Covid from different variants.

Scientists are working on vaccines that might work better against infection and mild Covid irrespective of mutations of the virus. It may be that we need to get a booster vaccine every few years to deal with new variants, particularly if one is at high risk of getting severe Covid. But equally, it is possible that the current vaccines may be enough.

What is the difference between the different vaccines?

There are 19 different vaccines currently used around the world against Covid, and more are being tested.

The vaccines mostly being used in South Africa at the moment are made by Pfizer and Johnson & Johnson (J&J). These vaccines work in very different ways. While more traditional vaccines use a component of the virus or a weakened or killed version of the virus which stimulates your body to develop an immune response, the Pfizer vaccine uses a copy of a molecule in our bodies called RNA which causes cells in our bodies to produce the protein that our immune system responds to.

The RNA vaccines do not in any way affect or alter your genes or your DNA. All the vaccines eventually get your body to respond in a similar way to how it would if infected — to produce cells and antibodies that can fight Covid-19. The advantage of the RNA vaccines is that RNA is easier to design and can be produced very quickly. Also, since it does not require the production of any form of the potentially very dangerous virus, it is also safer to produce.

It is not very easy to compare how well the different vaccines work because the trials in which they were tested used different groups of people at different places, involved different variants of the virus and used different study methods. But both J&J and Pfizer are working very well and giving people good protection against severe

Covid-19, including the variants of concern identified to date.

How were the vaccines developed so quickly and should this worry me about their safety?

Covid is a new kind of coronavirus, but coronaviruses are not new — the common cold we get every winter is often caused by one of the coronaviruses. This is part of what enabled vaccines to be developed so quickly. Also, huge amounts of funds and resources were mobilised very rapidly, which enabled swift development of the vaccines.

The vaccines have been thoroughly tested in multiple trials.

More than three billion doses of vaccine have been administered worldwide and in the US 150 million people are fully vaccinated. In the UK, about 55% of the population — about 36 million people — have been vaccinated. This is an extremely safe intervention.

How long will immunity last?

We do not yet know. It is possible that we will need to get a booster vaccine every year or two to keep up our immunity. Modelling studies suggest that people might require booster doses every 2-3 years to protect against severe Covid. To protect against infection and mild Covid might require annual boosting. We will find out over the next two to three years. The focus of vaccination is likely to be centred around protecting against severe Covid and death, rather than preventing infection and mild disease.

The myth of 'herd immunity'

Some commentators still maintain the aim of vaccination is to develop population-wide immunity, or "herd immunity". This is when enough people have immunity that the microorganism stops being able to circulate at all. Herd immunity was an aspirational goal until the virus started showing the ability of mutating, causing it to become more transmissible and relatively resistant to antibodies induced by past infection and by vaccines.

Consequently, it is unlikely that herd immunity will be achieved with this virus any time soon, and it will probably circulate, mutate, and recirculate throughout our lifetime, reinfecting us several times, like all the other coronaviruses. Luckily, individual protection against severe illness is still possible with the current vaccines even with the mutations that have occurred. Those who do not get vaccinated will face an increased probability of infection and potential severe illness as variants of the virus continue to circulate. This risk will increase as society returns to normal.

But it is likely that everyone, unless they hide behind a wall for the rest of their lives, will eventually get the virus. It's all about how badly you get it — whether you get it vaccinated or unvaccinated.

Do I need the vaccine if I have already had Covid?

Having had Covid definitely does provide short-term protection from severe illness, as the vaccines do, but there is no evidence that it is better than the protection acquired from vaccines (and the consequences, as we have noted, are severe).

It is early days yet, and we will have more data to guide things, but we are aware of many cases, including among our colleagues, where people have had a second case of Covid, occasionally severe.

If you have had Covid, the good news is you have lots of protection from severe illness in the short term. However, adding a vaccine on top of this may well stimulate a slightly different response (and augment an already primed immune system), and mean you enjoy additional protection. As we point out, the vaccines are very safe, and Covid does dreadful things, occasionally even in people with prior infection, so it is worth getting the vaccine as an additional precaution. One should wait for 2-3 months after having Covid before getting a vaccine, and you probably only require a single shot.

How do I sign up and find a vaccine site?

The Electronic Vaccination Data System (EVDS) offers online registration for vaccinations and identifies vaccination sites. Once registered on the system you will be allocated an appointment at a nearby vaccination site. You could also select which site you prefer. The registration system is becoming more flexible to enable more accessibility to getting vaccinated

Will I have to pay?

No. No one has to pay. If you do not have medical aid you will have free access to public sector vaccination sites. If you have medical aid it will cover the cost at the public sector or the private sites; you will not need to pay upfront. The government is in the process of setting up arrangements to ensure that all public and private sector sites can be accessed regardless of medical scheme membership.

Can I find a site vaccinating on weekends?

While many public sector sites are presently not working on weekends, many private sector sites are available. The government is working to achieve uniform coverage throughout the week. It is therefore important to get regular updates on weekend availability.

I'm waiting for my appointment but my friend just walked in and got a vaccine

Some vaccine sites have been allowing those who are registered in the system to come for a walk-in without an appointment. Which sites are doing this, and the extent to which the appointment system is being used, seems to be changing all the time. You might wait in a longer queue if you do a walk-in.

Finally, until you and the people you interact with are all fully vaccinated...

Continue to wear your mask when indoors and to keep windows open. Covid is an indoor respiratory virus: it is spread in the air, and it collects indoors where windows are closed. You are unlikely to get it outside, and opening windows in rooms, cars, taxis and buses makes everyone much safer. As you are fully immunised only two weeks after receiving your second vaccine dose, take this into account when making decisions about interacting with people.

Lucy Allais is professor of philosophy jointly appointed at Wits and Johns Hopkins University; Shabir Madhi is dean and professor of vaccinology at the Faculty of Health Sciences at University of the Witwatersrand, and director of the SAMRC Vaccines and Infectious Diseases Analytics Research Unit; Imraan Valodia is dean of the Faculty of Commerce, Law and Management, and director of the Southern Centre for Inequality Studies, University of the Witwatersrand; Alex van den Heever is an adjunct professor and holds the chair of Social Security Systems Administration and Management Studies at the Wits School of Governance; Martin Veller is the former dean of the Faculty of Health Sciences at the University of the Witwatersrand; Francois Venter is a professor of medicine at Ezintsha, Faculty of Health Sciences, University of the Witwatersrand.

WATER, POWER CUTS AND NEGLECT ARE TAKING THEIR TOLL ON SOUTH AFRICA'S TOP HOSPITALS 8 JULY 2021 - PROFESSOR DAYNIA BALLOT

South Africa is quite capable of delivering world-class healthcare to all its citizens. But this is constantly being hampered.

A fire at one of the biggest public hospitals in Johannesburg, the Charlotte Maxeke Johannesburg Academic Hospital, and the delay in reopening the facility has brought infrastructural issues into sharp focus. The fire broke out in mid-April. Only now is a phased re-opening of the hospital being undertaken.

Reopening was delayed due to fire safety issues. A host of compliance measures weren't in place. These included fire hydrants without a water supply, fire hydrants without correct couplings, non-functional fire doors and a lack of emergency lighting in the stairwells. These deficiencies had been longstanding.

I am extremely familiar with conditions on the ground in hospitals in the area. I interact daily with doctors and students in the different academic hospitals on the circuit of the University of the Witwatersrand. These include the Charlotte Maxeke Johannesburg Academic Hospital, Chris Hani Baragwanath Academic Hospital, Helen Joseph Hospital and Rahima Moosa Mother and Child Hospital. I also visit different institutions in the region.

I completed both my undergraduate and postgraduate training at these hospitals and worked for more than 30 years in the neonatal-paediatric intensive care unit and neonatal unit at Charlotte Maxeke Johannesburg Academic Hospital.

During this time I've observed many changes in the healthcare sector in general, and in these hospitals in particular.

South Africa's healthcare system compares favourably on a global level. Both the medical schools of the University of the Witwatersrand and the University of Cape Town are ranked in the top 100 in the world. Over the years, the region has produced many eminent healthcare workers. And the country is quite capable of delivering world-class healthcare to all its citizens.

But this is constantly being hampered by an increasingly unconducive environment.

Massive strain

The public sector hospitals in Gauteng, South Africa's economic hub, are generally in bad condition. Chris Hani Baragwanath Academic Hospital is the third largest largest in the world, with almost 3200 beds and more than 6000 staff. Charlotte Maxeke Johannesburg Academic Hospital has 1088 beds and more than 4000 staff.

These large public sector hospitals provide tertiary and quaternary services to more than 250,000 inpatients and almost 1 million outpatients every year.

Most were built more than 50 years ago and have been poorly maintained. The crumbling infrastructure results in flooding, sewage leaks, lack of water, problems with the supply of medical air and oxygen, and electricity blackouts. Leaky plumbing creates a damp environment that favours pests such as cockroaches and rodents. Inadequate air conditioning results in working conditions that are unbearably hot or freezing cold. Both are harmful to patients.

Doctors and nurses are having to deal with a shortage of hospital beds on a daily ba-

sis.

Gauteng provides healthcare to many patients from other provinces, as well as surrounding countries, particularly Zimbabwe. The provinces of North West and Mpumalanaga do not have medical schools and therefore send patients for specialised tertiary and quaternary care, such as cardio-thoracic surgery and renal dialysis, to the Gauteng academic hospitals.

In addition, under-resourced regional and district hospitals result in primary and secondary patients receiving treatment in the tertiary or quaternary institutions because there is nowhere else for them to go.

Overcrowding and infrastructural issues negatively affect patient care. Hospital acquired infections with "super bugs" resistant to almost all known antibiotics are a major health challenge. Sewage leaks and inadequate plumbing increase the risk of infections.

Ongoing power cuts and water shortages compound the internal infrastructural issues at each hospital. There have been rolling electricity blackouts in the country as the government struggles to keep the power utility, Eskom, operational.

Each hospital has a diesel generator. But this emergency back-up does not always kick in during blackouts and load shedding. Patients in intensive care and the operating theatre are particularly at risk.

Water infrastructure, which has not been maintained by local authorities, is in a state of disrepair resulting in a growing number of water outages. In recent weeks, three of the largest hospitals in the province– the Helen Joseph Hospital, Rahima Moosa Mother and Child Hospital and Chris Hani Baragwanath Academic Hospital – all experienced a water outage that lasted several days.

Surgeons were scrubbing for theatre using buckets, people could not flush toilets, and patients were issued with bottled water and could not wash.

On top of all this, the COVID-19 pandemic is now raging in the province. This is proving to be the last straw for a buckling health system. Shortages of hospital beds, lack of oxygen supplies, inadequate ICU facilities are a few of the problems being faced.

Healthcare workers are exhausted and burned out.

How it got to this

There are multiple reasons for the current debacle. These include a lack of preventative maintenance, poor administration, corruption, poor forward planning, lack of financial resources, and a lack of strong governance at both municipal and provincial level.

The governance of the hospitals is complex and falls between different government departments. The Department of Infrastructure and Development, or Public Works has been tasked by the Department of Health to take care of the hospital infrastructure. This means that a hospital CEO isn't directly responsible for maintenance of the building.

In turn this means that the system for responding to maintenance issues is not agile.

Bureaucratic processes designed to minimise corruption result in long delays. Management at all levels tends to put out fires rather than implement a long term strategy to improve the situation.

Facilities have also been affected by strikes about wage disputes. In some cases hospital facilities have been damaged during the industrial action.

Criminality is also a problem. Theft is common with wall mirrors, bathroom tiles, soft furnishings, even large potted plants disappearing. Most recently copper plumbing pipes were stolen from Charlotte Maxeke Johannesburg Academic Hospital while it stood empty.

The fallacy that South Africa has two healthcare systems

There is a perception of an "us and them" among many South Africans. People with medical aid feel relieved that they have access to private healthcare, which does not have all these problems.

This is a fallacy. The country has one healthcare system – the public academic institutions train the healthcare workers who work in both the private and public sector. If the public healthcare sector collapses, the private sector will follow.

The solution is proper management and accountability at all levels. South Africa spends enough money on healthcare (just over 10% of GDP), but there is terrible waste at many levels. The government is pursuing a National Health Insurance scheme, with the aim of pooling resources to provide "quality affordable personal health services for all South Africans, based on health needs, not socio-economic status".

If implemented and governed properly, the new scheme is most likely the best solution to all the many problems facing country's healthcare system. And it will allow South Africa to reach its full potential of providing excellent healthcare to all.

Professor Daynia Ballot, Head, School of Clinical Medicine, University of the Witwatersrand.

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011 717 2565 OR EMAIL studentsupport.health@wits.ac.za

Experiencing food insecurity? Email makeadifference.health@wits.ac.za

Other Important Resources:

Wits Student Crisis line (24/7/365) 0800 111 331

South African Depression and Anxiety Group (SADAG) Mental Health Line 011 234 4837

Suicide Crisis Line 0800 567 567

Discovery Medical Students Helpline 0800 323 323

Cipla WhatsApp Chat Line 076 882 2775

Cipla 24hr Mental Health Helpline 0800 456 789

Other Important Resources:

Pharmadynamics Police &Trauma Line 0800 20 50 26

Adcock Ingram Depression and Anxiety Helpline 0800 70 80 90

ADHD Helpline 0800 55 44 33

Department of Social Development Substance Abuse Line 24hr helpline 0800 12 13 14 SMS 32312

Lifeline: 011 728 1347 / 0861 322 322

UPCOMING SCHOOL EVENTS

SOCM MEETING DATES

Head of Department meeting

Date	Time	Venue
14/09/2021	15h00	Microsoft teams
05/10/2021	15h00	Microsoft teams
09/11/2021	15h00	Microsoft teams

SOCM EXCO Committee meeting

Date	Time	Venue
13/10/2021	13h00	Microsoft teams
17/11/2021	13h00	Microsoft teams

SOCM Transformation Committee Meetings

Date	Time	Venue
23/09/2021	14h00	Microsoft teams
25/11/2021	14h00	Microsoft teams

SOCM HR & Finance Committee Meetings

Date	Time	Venue
27/10/2021	10h30	Microsoft teams
24/11/2021	10h30	Microsoft teams

SUBMISSION OF CONTENT

The newsletter will be published bimonthly and we welcome all content, staff (academic & professional) achievements, profiles, and student events and achievements. Photos are always welcome . Should you wish to submit any content for publication, kindly send it to: **Rita.Kruger@wits.ac.za by 30 September 2021.**(Please note that due to space restrictions content may be edited)