

# South African Vaccination and Immunisation Centre

**Annual Report  
2017**



SEFAKO MAKGATHO  
HEALTH SCIENCES UNIVERSITY





## Motto

Dedicated to strengthening immunisation services



## Vision

An African continent free of vaccine-preventable diseases



## Mission

Committed to increasing knowledge on vaccine-preventable diseases and improving the quality and sustainability of immunisation services

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## ▶ List of Abbreviations

<b>AEFI</b>	Adverse events following immunisation
<b>AMR</b>	Antimicrobial resistance
<b>CHE</b>	Council for Higher Education
<b>CPD</b>	Continuing Professional Development
<b>DPRU</b>	Diarrhoeal Pathogens Research Unit
<b>ECAVI</b>	East Africa Centre for Vaccines and Immunization
<b>ENAAABLERS</b>	Enhancing Appropriate Antimicrobial use via mHealth and other techniques in the Republic of South Africa
<b>EPI</b>	Expanded Programme on Immunisation
<b>EPI-SA</b>	EPI of South Africa
<b>GSK</b>	GlaxoSmithKline
<b>HBV</b>	Hepatitis B virus
<b>HCert</b>	Higher Certificate
<b>HCW</b>	Healthcare workers
<b>HPV</b>	Human papillomavirus
<b>IMVACC</b>	International Master of Advanced Studies in Vaccinology
<b>MSD</b>	Merck Sharp & Dohme
<b>NAGI</b>	National Advisory Group on Immunisation
<b>NDoH</b>	National Department of Health
<b>NESI</b>	Network for Education and Support in Immunisation
<b>NISEC</b>	National Immunisation Safety Expert Committee
<b>SAMRC</b>	South African Medical Research Council
<b>SAQA</b>	South African Qualifications Authority
<b>SAVIC</b>	South African Vaccination and Immunisation Centre
<b>SMU</b>	Sefako Makgatho Health Sciences University
<b>UNICEF</b>	United Nations International Children's Emergency Fund
<b>VACFA</b>	Vaccines for Africa Initiative
<b>VPD</b>	Vaccine-preventable Disease
<b>VSC</b>	Vaccinology Short Course
<b>WHO</b>	World Health Organization
<b>WHO/AFRO</b>	WHO Regional Office for Africa



## ▶ Executive Summary

Vaccination, the most cost-effective healthcare intervention preventing morbidity and mortality associated with vaccine-preventable diseases (VPDs), has been estimated to prevent between two and three million deaths annually. The role and input of universities responsible for research, education and training of healthcare workers (HCWs) in the prevention and control of VPDs, cannot be underestimated. The South African Vaccination and Immunisation Centre (SAVIC) was established in 2003, as a network of partners in the field of vaccination and immunisation. SAVIC is a Public/Private/Academic alliance between the National Department of Health (NDoH), the vaccine industry, academic institutions and other stakeholders, with its activities undertaken in close collaboration with the NDoH, Network for Education and Support in Immunisation (NESI) at the University of Antwerp, the World Health Organization (WHO) and its partners. The strategic operational areas of SAVIC include **Education and Training, Research, and Technical Support and Advocacy**. Several activities were undertaken within each of these areas in 2017.

In the area of **Education and Training**, two important milestones regarding Vaccinator Accreditation of South African HCWs, were reached. Firstly, the online Higher Certificate (HCert) (Vaccinology) programme was accredited by the Council for Higher Education (CHE) and registered for accreditation by the South African Qualifications Authority (SAQA), bringing the HCert one step closer to SAQA accreditation. Secondly, the official full series of three Vaccinology Short Courses (VSCs) developed by SAVIC were offered in 2017, and were very well received, increasing vaccinology knowledge significantly.

In the area of **Research**, during 2017, SAVIC members supervised/co-supervised numerous PhD and masters-level projects, and authored/co-authored several research outputs in the fields of social and behavioural issues related to vaccination uptake, and the epidemiology of VPDs. These included ten international and five national journal publications, while the results of these studies were presented at local (four presentations), national (three presentations) and international (14 presentations) conferences during 2017.

In the area of **Technical Support and Advocacy**, SAVIC regularly participates in vaccinology courses and meetings, both as lecturers and as participants, which allows SAVIC members to remain at the cutting edge of new developments in vaccinology. During 2017, SAVIC members attended eight meetings to provide technical input and support; lectured at nine symposia/courses/workshops; and participated in nine courses/workshops for self-development. In addition to the VSCs significantly increasing vaccinology knowledge as detailed under Education and Training, these VSCs turned a group of participating MPharm students into passionate immunisation advocates, leading them to initiate and embark on a very successful seven-week vaccination catch-up campaign. Furthermore, SAVIC members were appointed by the Minister of the National Department of Health to serve on two National Advisory boards, i.e. National Advisory Group on Immunisation (NAGI) and the National Immunisation Safety Expert Committee (NISEC).

## ▶ Background

It is well established that immunisation is one of the most cost-effective and successful public health interventions in the history of humanity. In 1974 the WHO established the Expanded Programme on Immunisation (EPI), which initially provided universal vaccination against six VPDs (tuberculosis, polio, diphtheria, tetanus, pertussis and measles), to children under the age of six years. Over the next four decades, as safe and effective vaccines became available against other infectious diseases causing high global burdens of mortality and morbidity, these were incorporated into the EPI, which is currently estimated to prevent 2.5 million deaths globally every year. Since it was launched in 1995, the EPI of South Africa (EPI-SA) has closely followed WHO guidelines, and currently provides free immunisation against 11 VPDs, having added vaccines against five VPDs to the traditional six, these being vaccines against hepatitis B (1995), *Haemophilus influenzae* type b infection (1999), invasive pneumococcal disease (2009), rotavirus diarrhoea (2009) and cervical cancer (2014). EPI-SA has achieved many successes, with neonatal tetanus being eliminated by 2002; no wild-type poliovirus transmission reported since 1989; >60% reduction in hepatitis B virus (HBV) prevalence in those born after 1995; >40% reduction of pneumococcal disease in all age groups since 2009; and a 60% reduction in rotavirus-associated hospitalisations since 2009. Furthermore, since its inception, EPI-SA has enjoyed tremendous political and financial support from the National Treasury, which has allowed it to be an African leader in introducing new and underutilised vaccines. For example, South Africa was the first African country to introduce into its EPI (a) the pneumococcal conjugate vaccine; (b) the rotavirus vaccine; and (c) a hexavalent vaccine against diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type b infection and hepatitis B.

As new vaccines become available and are recommended by the WHO, countries face many challenges in introducing these vaccines into their existing immunisation programmes, and South Africa is no exception. These challenges include decision-making and prioritisation of these vaccines against other competing health programmes; addressing strengths and weaknesses in the immunisation programme; managing more complicated vaccination schedules; developing multi-year plans to ensure sustainable use of the new vaccines; integration of these vaccines in the broader context of health systems; and building and maintaining public trust in these vaccines. Thus, continued and increased efforts are required not only to accelerate action to vaccinate children against VPDs but to reach and maintain high vaccination coverage.

Globally, universities have an important responsibility and role in supporting their respective ministries of health in the prevention and control of VPDs, since they are responsible for research, education and training of HCWs. SAVIC was established at the Medical University of Southern Africa ([MEDUNSA], which subsequently became the Medunsa Campus of the University of Limpopo, and is now the Sefako Makgatho Health Sciences University [SMU]) in 2003, as a network of partners in the field of vaccination and immunisation. Since its inception, SAVIC has worked very closely with NESI, and since January 2012, SAVIC has functioned as a NESI focal office for the southern African region.

SAVIC is a Public/Private/Academic alliance between the NDoH, the vaccine industry, academic institutions and other stakeholders, with its activities undertaken in close collaboration with the NDoH, NESI, the WHO and its partners. SAVIC was established to strengthen collaborations between academics, the NDoH, the vaccine industry and other stakeholders, with the overall aim of supporting immunisation services. Although there are some players in the field of vaccines and immunisation, SAVIC has a unique aim of strengthening immunisation programmes by bridging the gap through the cascading of up-to-date vaccine-related information to the community and operational-level staff with various innovative outreach programmes. Thus, SAVIC creates a platform whereby experts from universities, the NDoH and provincial departments of health, the vaccine industry, non-governmental organisations and Public/Private Partnerships interact in a joint effort to improve public health programmes concerning VPDs.





# ► Strategic operational areas

The **strategic operational areas of SAVIC** focus on three issues:

- a. Education and Training
- b. Research
- c. Technical Support and Advocacy

Within each strategic area, several objectives were realised by specific activities undertaken in the year under review. Some of these activities were undertaken in collaboration with other stakeholders such as NAGI, NDoH, NESI, North-West University, SMU, South African Medical Research Council (SAMRC), Strathclyde University, University of Antwerp, University of Limpopo, University of Cape Town, and the vaccine industry.

## Education and Training

During 2017 a number of activities were conducted that addressed the objectives under this strategic goal. These included a) organising education and training programmes; b) contributing to the improvement of pre-service EPI training programmes/curricula for training institutions; and c) contributing to the improvement of knowledge of in-service staff through dedicated themed programmes.

### Vaccinator accreditation: Progress with offering the Higher Certificate in Vaccinology [HCert (Vaccinology)] programme

Significant progress was made during 2017 towards offering the online HCert (Vaccinology) programme, developed in partnership with the NDoH, NAGI, the vaccine industry, and academics from the SMU departments of Virology, Microbiology, Public Health, Public Health Pharmacy and Management, and Nursing Sciences. This is a basic introductory programme for in-service HCWs who work in public and private sector primary healthcare clinics offering infant/childhood vaccination services. It is designed to equip HCWs with the theoretical knowledge and practical expertise necessary for running an up-to-date clinic offering infant/childhood vaccination services. It introduces students to key concepts in vaccinology, and at the end of the programme students will be knowledgeable about VPDs, vaccines, vaccination and immunisation, and will be able to apply this knowledge in the practice of vaccine delivery and administration within the framework of EPI-SA and private sector vaccination programmes. During 2017, the programme study guides and supporting documents were created and registered on the CHE website, and the HCert was accredited by the CHE at the end of 2017, taking the HCert one step closer to SAQA accreditation. Furthermore, the services of a specialist online learning management systems company were secured in 2017, to develop a unique, fully articulated platform for the HCert, which allows for fully automated progression throughout the programme, with each student working at their own pace. Piloting will now take place in early 2018. Following piloting on expert volunteers, and SAQA accreditation in 2018, SAVIC plans to offer the qualification from 2019.

### Vaccinator accreditation: SAVIC Vaccinology Short Courses: 19–20 April 2017; 25–26 May 2017; 17–18 August 2017 and 23–24 November 2017

SAVIC Vaccinology Short Courses (VSCs) became permanent fixtures in SAVIC's calendar during 2017. These VSCs are based on the HCert (Vaccinology) modules and are offered to HCWs who prefer face-to-face lectures and want to stay up-to-date with vaccinology for continuing professional development (CPD) purposes, without necessarily enrolling for a qualification. Participants obtain certificates of attendance which are CPD-accredited by the Health Professions Council of South Africa for attendance of each of these two-day courses. Details of how these VSCs are run can be found in the 2016 Annual Report.

The third VSC (modules 7 and 9 to 11) was piloted from 19–20 April 2017, and was very well received by participants (two vaccinators from the private sector, four from the public sector and 15 postgraduate students – four MPharm and 11 MSc [Medical Virology]) and observers (one from the private sector and one SMU academic). The majority of participants rated the course from “very good” to “excellent”, with only two participants having technical challenges in accessing the homework via Dropbox. A pre-course/post-course evaluation of knowledge regarding the three modules found that overall, the mean knowledge score increased from 38.5% to 59.8%. Because there were a large group of postgraduate students who were not practicing as vaccinators, the analysis was further stratified. The mean knowledge score of the (a) MPharm students increased from 47.0% to 58.8%; (b) MSc (Medical Virology) students increased from 25.7% to 57.1%; and (c) in-service HCWs increased from 42.7% to 63.4%.

Based on the participants' satisfaction evaluations and pre-course/post-course knowledge evaluations from the pilot VSC series, all modules were revised and improved. Furthermore, module contents were updated where necessary, and the updated modules were reviewed by a team from the Affordable Medicines Directorate of the NDoH, headed by the Deputy Director of the Essential Drugs Programme.

The first official VSC (modules 1 to 4) was offered from 25–26 May 2017 and was very well received by participants (two from the private sector; nine from the public sector; and eight postgraduate students). The majority of participants rated the course from “very good” to “excellent”, with the only part that received an average lower rating of “good” being the homework, as a number of participants could not access the Dropbox link for videos. A pre-course/post-course evaluation of knowledge regarding the four modules found that the mean knowledge score increased from 39.6% to 63.6%.

The second VSC (modules 5, 6 and 8) was offered from 17–18 August 2017 and was also very well received by participants (four from

the private sector; five from the public sector and six postgraduate students). The majority of participants rated the course from “very good” to “excellent”, with the only part that received a lower rating of “good” being the presentation, as a number of participants found some of these sessions too long. A pre-course/post-course evaluation of knowledge regarding the three modules found that overall, the mean knowledge score increased from 42.2% to 58.7%. Because there were a number of postgraduate students who were not practicing as vaccinators, the analysis was further stratified. The mean knowledge score of the postgraduate students increased from 37.1% to 57.2%, while the knowledge of the in-service HCWs increased from 45.1% to 59.6%.

The third VSC was offered from 23–24 November 2017 and was also well received by participants (ten from the private sector and eight from the public sector). The majority of participants rated the course from “very good” to “excellent”, with the only part that received a lower rating of “good” being module 11, as a number of participants found it too long. A pre-course/post-course evaluation of knowledge found that the mean knowledge score increased from 46.4% to 57.4%.

The success of these VSCs has led to SAVIC being requested to conduct outreach courses in other provinces, with the first outreach to be held in the Western Cape (Knysna). In addition, SAVIC will be conducting its usual on-campus VSCs from 19–20 April; 20–21 September; and 22–23 November 2018.



*Participants and lecturers participating in SAVIC's 2017 Vaccinology Short Course 3*



*Group work session during SAVIC's 2017 Vaccinology Short Course 3*

## Research

In 2017, SAVIC members supervised/co-supervised three PhD and ten master-level students working in the field of VPDs. During the period, SAVIC members authored or co-authored several research outputs in the fields of social and behavioural issues related to vaccination uptake and the epidemiology of VPDs. These included ten international and five national journal publications, and the results of these studies were presented at local (four presentations), national (three presentations) and international (14 presentations) conferences. See Annexure 1 for further details. The following activities were conducted within SAVIC's key research areas in 2017.

### Epidemiology of vaccine-preventable diseases (including diseases for which vaccines are being developed)

#### **The epidemiology of human papillomavirus infection**

Dr Lebelo is the Deputy Project Leader leading the laboratory science aspect of the VLIR-IUC project 4 that deals with laboratory science and public health management of sexually transmitted infections. The project, which started in 2015, progressed well during 2017 with several postgraduate students specifically working on the epidemiology of human papillomavirus (HPV). These included two PhD projects, and four masters-level projects. Universities collaborating on the HPV lab-based projects include three South African universities (SMU, University of Limpopo and University of KwaZulu-Natal) and the University of Antwerp (Belgium).



*Ms Varsatile Nkwinka receiving the award for best poster presentation (on behalf of Dr Lisbeth Lebelo) at the FIDSSA Congress 2017*



*Ms Varsatile Nkwinka presenting her poster at the SMU 2017 Research Days*

### ***The epidemiology of rotavirus infection***

Prof. Mphahlele is the Director of the Diarrhoeal Pathogens Research Unit (DPRU) at SMU. The DPRU was established at the former MEDUNSA in April 1996, and was the first South African Medical Research Council (SAMRC) unit to be founded at a previously disadvantaged institution. As part of the national rotavirus surveillance programme, co-ordinated by the National Institute for Communicable Diseases (NICD), the DPRU aimed to monitor the impact of rotavirus vaccination at the Dr George Mukhari Academic Hospital, where there was clear evidence of changing patterns of rotavirus epidemiology after the introduction of the rotavirus vaccine into EPI-SA. As many African countries have begun to introduce the rotavirus vaccine into childhood immunisation programmes, the DPRU, which is a WHO Rotavirus Regional Reference Laboratory, continued in 2017 to assist African countries through regional workshops to generate data required for rotavirus vaccine advocacy and implementation, as well as future monitoring of vaccine effectiveness.

### ***The epidemiology of viral hepatitis infections***

Mr Rakgole, Dr Lebelo, Prof. Burnett and Prof. Mphahlele work within this research niche area. SMU has a long history of working in the field of the prevention and control of viral hepatitis, including conducting clinical trials pre-introduction of the hepatitis B vaccine (HepB) into EPI-SA; post-HepB introduction effectiveness studies; research on the impact of HIV co-infection on viral hepatitis infections; research on local circulating strains of hepatitis A, B, C and E viruses to inform future vaccine formulation; and HBV infection in HCWs. During 2017, surveillance was conducted on HBV among HCWs from various primary health clinics (PHCs) in the Tshwane Northern Region. This project aims to assess the vaccination status of HCWs; prevalence of molecular and serological markers of HBV; genetic distribution of HBV strains; and factors related to the vaccination status of HCWs. Blood samples and completed questionnaires were obtained during 2017; testing and analyses of the samples and questionnaires are ongoing.

### ***Socio-behavioural research***

#### ***Countering anti-vaccination lobbying in South Africa***

SAVIC's NRF-funded project on anti-vaccination lobbying in South Africa, which started in 2016, progressed well during 2017. Several postgraduate students joined the project during 2017, which now includes one PhD project in Consumer Science, and seven masters-level (five MPharm, one MCur and one MPH) projects. In addition to SAVIC members, collaborators on this project include academics from the University of Antwerp (NESI), North-West University and University of Limpopo. The social media tracking project, in collaboration with DigitLab, analysed over 30 000 posts in 2017, and produced two reports. The first report covered 16 411 South African vaccination-related conversations between December 2016 and May 2017, while the second covered 13 935 posts between June and December 2017.

#### ***Increasing vaccination uptake to prevent infectious diseases, as an important pillar of Antimicrobial Stewardship***

This is a new project, which started in 2017, funded by the SAMRC and United Kingdom Medical Research Council Collaborative Research Programme on Antimicrobial Resistance, in which Prof. Meyer

is a co-investigator. The two principle investigators within the collaboration are Prof. N Schellack from the School of Pharmacy at SMU and Prof. M Bennie from the Strathclyde Institute of Pharmacy and Biomedical Sciences (SIPBS) at Strathclyde University, Glasgow, UK. Apart from SMU's collaboration with Strathclyde University, other co-investigators on the project are from the University of Cape Town, Ampath National Laboratory Services in Johannesburg and the Ohio State University, Columbus, Ohio. This study, entitled Enhancing Appropriate Antimicrobial use via mHealth and other techniques in the Republic of South Africa (ENAABLERS Project), aims to develop mHealth applications and initiatives to measure, monitor and enhance the appropriate use of antimicrobials and vaccines in the public healthcare system in South Africa to reduce future antimicrobial resistance (AMR) rates. This is in line with the National Department of Health AMR National Strategy Framework 2014–2024, with AMR a major concern, given the current burden of infectious diseases in South Africa. Prof. Meyer participated in three planning, implementation and progress workshops/meetings for the project in Scotland and South Africa, i.e. Strathclyde University (15–19 May 2017 and 14 November 2017) and SMU (18–22 September 2017). During 2017, several postgraduate students joined this project to work on projects that overlap with the project on countering anti-vaccination lobbying. A major focus of the project is the use of point prevalence surveys to determine antimicrobial use, of which preliminary findings on the pilot study were presented by Prof. Meyer at the European Drug Utilisation Research Group (EuroDURG) Conference in Glasgow, UK, 15–17 November 2017.

### **Technical support and Advocacy/Community Outreach**

SAVIC members regularly participate in vaccinology courses and meetings, both as lecturers and as participants, which allows the team to remain at the cutting edge of new developments in vaccinology. SAVIC members also regularly advocate for vaccination through participation in non-academic committees and activities.

#### **Technical support given by SAVIC members**

During 2017, two SAVIC members were appointed by the Minister of Health to national advisory committees: Prof. Meyer was appointed to the National Immunisation Safety Expert Committee, and Prof. Burnett was appointed to the National Advisory Group on Immunisation. Prof. Burnett was also appointed to the Advisory Committee of Vaccines for Africa Initiative (VACFA), at the University of Cape Town. SAVIC members provided technical support to the NDoH and other partners at the following meetings:

#### ***NDoH workshop on South African Demographic Health Survey and EPI Turn-Around Strategy – Civitas Building, Pretoria, 22 August 2017***

Prof. Meyer and Prof. Burnett participated in this meeting, organised to discuss and respond to the findings of the 2016 South African Demographic Health Survey (SADHS). The performance of EPI-SA for the past three years was presented, followed by presentations on informed consent, reaching every child, and the SADHS report. Key issues from NAGI, WHO/UNICEF and Biovac were presented, and thereafter the plan for an EPI Turn-Around Strategy using baseline data to be collected and evaluated by the WHO was discussed.

**WHO Rotavirus Regional Reference Laboratory Meeting with SMU Management – Main Boardroom, Sefako Makgatho Health Sciences University, Pretoria, South Africa, 25 August 2017**

Profs Burnett and Meyer attended the meeting where the WHO reported on the role of the WHO Rotavirus Regional Reference Laboratory South Africa in rotavirus genotyping in the AFRO region. Current and future collaboration with the SAMRC DPRU at SMU were discussed.

**MSD Expert Input Forum/Advisory Board on Varicella Disease in South Africa – Intercontinental Hotel, OR Tambo, 1 September 2017**

Dr Maphoto participated in the MSD advisory board meeting and gave expert input on varicella disease in South Africa. This meeting included expertise from the private and public health sectors as well as infectious diseases specialists and clinical scientists. The meeting discussed the impact of varicella disease in South Africa, and strategies that can be utilised if there is a need for the introduction of the varicella vaccine within the public health sector.

**WHO Workshop on Adverse Events Following Immunisation (AEFI) Surveillance and Causality Assessment – Burgers Park Hotel, Pretoria, 19–21 September 2017**

Prof. Meyer attended the workshop as a member of the National Immunisation Safety Expert Committee (NISEC). Although the training was mainly targeted at NISEC members, representatives from various other units were also invited to attend including the provinces, National Control Laboratory, Pharmacovigilance Committee at the Medicines Control Council, and the National Adverse Drug Event Monitoring Centre in Cape Town. The workshop was very informative in terms of AEFI reporting and investigation procedures, the WHO methodology for conducting causality assessments of AEFI, as well as vaccine safety communication.

Expected outcomes of the workshop included institutionalisation of weekly and monthly reporting of minor and serious AEFI, investigation of all serious AEFI cases as per AEFI guidelines, national and provincial support to districts in AEFI investigations, and causality assessment of serious cases by the national AEFI committee (NISEC). An immediate outcome of the workshop was the revision of the current AEFI reporting and investigation forms for further refinement by NISEC.

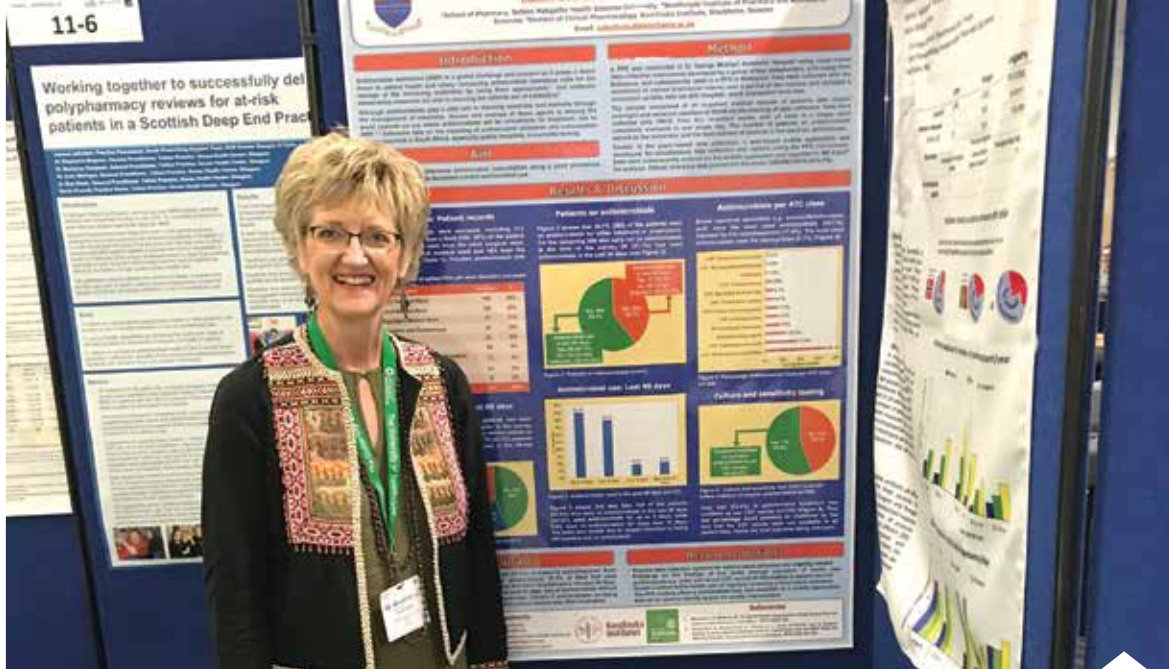
**Overview of Vaccine-related Research – Sefako Makgatho Health Sciences University, Pretoria, South Africa, 20 September 2017**

This was a briefing meeting organised for the visiting collaborators of the ENABLERS Project, Prof. Bennie and Dr Kurdi from the Strathclyde University in Scotland. Prof. Meyer is one of the co-investigators, and Mr Sibanda conducts research for this project. As part of an Antimicrobial Stewardship Strategy to reduce AMR, the project aims to determine the utilisation, uptake and timeliness of vaccines (EPI and seasonal influenza) in selected public and private sector facilities in South Africa. These objectives align with SAVIC's mandate. Dr Musyoki presented an overview of vaccine-related research at SMU, including HBV, HPV and rotavirus vaccines, NRF projects and HBV in HCW.

**NDoH Child Health Partners' Meeting – Civitas Building, Pretoria, 27 September 2017**

Prof. Meyer and Dr Maphoto participated in this meeting during which the development and implementation of the new Road-to-Health Booklet (RTHB), which will replace the Road-to-Health Chart (RTHC), was discussed with various stakeholders. Compared to the old RTHC, the new RTHB is a more comprehensive health record of the child's immunisations, growth and HIV-related care, including health promotion messages.





Prof. Hannelie Meyer presenting at the European Drug Utilisation Research Group (EuroDURG) Conference in Glasgow, UK

**NDoh/WHO in-depth EPI Review – Gauteng Province, 30 October–10 November 2017**

The aim of the review was to assess the performance of EPI-SA with a particular focus on the organisation and implementation of vaccine management and surveillance for conditions targeted by EPI-SA for control, elimination and eradication. Dr Razwiedani, Dr Maluleka and Dr Maphoto participated in data collection in Gauteng.

**Vaccinology Scientific Congress 2017 – Mount Grace Hotel, Magaliesburg, 1–3 October 2017**

This biennial congress aims to critically examine a broad spectrum of global vaccinology issues with a specific focus on Africa. Prof. Burnett presented on “Hepatitis B vaccination of healthcare workers”. The meeting was also attended by Prof. Meyer, Dr Maphoto and Mr Sibanda.

**In-depth Comprehensive Expanded Programme on Immunisation (EPI) and Surveillance Review Feedback Meeting – Civitas Building, Pretoria, 10 November 2017**

Prof. Burnett and Dr Razwiedani attended this meeting where the WHO presented its findings on the in-depth EPI review, and the NDoH and the WHO discussed the plan for the EPI Turn-Around Strategy.

**13<sup>th</sup> Annual African Vaccinology Course (VACFA) – Cape Town, South Africa, 13–17 November 2017**

The objectives of the meeting were to provide participants with essential expertise to support national immunisation programmes; to broaden the understanding of the challenges and opportunities in vaccinology at regional and global levels; build sustainable research capacity for vaccine development and conducting high quality phase 1-IV vaccine trials in Africa; foster communication and networking among African vaccinologists; and to discuss the roles and challenges of the National Immunisation Technical Advisory Groups (NITAGs) in the strengthening of the immunisation programmes in Africa. Prof. Burnett presented on “The relevance of continuous training in Africa; experience from South Africa”. Dr Lebelo and Mr Sibanda also attended the course.

**Advocacy**

During 2017, Prof. Meyer continued to serve on the Executive Committee of the National Vaccinators Forum, while other SAVIC members were active players in disseminating correct information on the benefits of vaccines to communities and countering anti-vaccination messages, through the internet, radio, newspapers, magazines and articles aimed at the lay public and HCWs. During 2017 SAVIC advocated for vaccines and immunisation using social media (Twitter and Facebook), and was interviewed by journalists from Clicks Clubcard, Huisgenoot and MamaMagic Milestones. Furthermore, Prof. Burnett published two articles for lay people and HCWs on immunisation of the elderly and helped correct vaccination misinformation published in a local newspaper, and a newsletter circulated to senior citizens. Also, Dr Maphoto was interviewed about immunisation on Thobela FM National Radio Station.



## Community Outreach

### ***MPharm Vaccination Catch-up Campaign, and participation in the West Rand District 2017 Emergency Measles Campaign***

In addition to significantly increasing vaccinology knowledge as detailed under Education and Training, the VSCs also increased the passion and advocacy for increasing immunisation coverage in South Africa. This was not only evidenced by the enthusiastic discussions held during the VSCs, but also by the actions taken by a group of MPharm students from the Public Health Pharmacy and Management Division of the School of Pharmacy at SMU, who had participated in the pilot series of VSCs held during 2016 and early 2017. In response to the 2017 measles outbreak in Gauteng, these students participated in the West Rand District 2017 Emergency Measles Campaign, held during May 2017. Furthermore, under the leadership of Prof. Meyer, and in partnership with the Gauteng Department of Health, Tshwane District Expanded Programme on Immunisation (EPI), they embarked on a seven-week vaccination catch-up campaign during National Child Health Month (August), and Pharmacy Month (September). Importantly, it was the postgraduate students themselves who initiated this campaign and raised funds to support it. They hosted these events on Saturdays

at various locations across the City of Tshwane Metropolitan Municipality and recruited other postgraduate and undergraduate students from the School of Pharmacy to help. The campaign aimed to create awareness about the importance of vaccination, and to provide access to vaccines for children up to the age of 12 years, thereby providing an opportunity for all children who had missed any routine vaccinations to get vaccinated. In addition to administering the vaccines, the Tshwane District EPI team also provided deworming agents and vitamin A supplementation. As a result of this catch-up campaign, 1 081 children were reached of whom 914 (84.5%) were vaccinated, 56.6% received vitamin A supplementation and 56.1% deworming. A third (30.6%) of the catch-up vaccinations were for measles, and 22.1% were for the tetanus-diphtheria combination. Two events hosted in the most resource-limited areas of Winterveldt and Mabopane contributed to nearly half (27.0% and 18.6% respectively) of all the children reached. The response from the community towards the vaccination catch-up campaign was overwhelmingly positive. SAVIC has pledged to continue supporting similar vaccination catch-up campaigns in the future, with the next one being planned for the second semester of 2018.



*Sr Mpho Moshime vaccinating a child during the Vaccination Catch-up Campaign in Soshanguve*



*Ms Nokuthula Dlamini and Ms Unami Sibanda reconstituting the vaccine vials during the West Rand District 2017 Emergency Measles Campaign*



*Prof. Meyer (back row, third from right), Sr Mpho Moshime (EPI Manager: Tshwane District Health Services; middle row, second from left) and the Vaccination Catch-up Campaign Team at Jubilee Mall, Hammanskraal*

### **National Pharmacy Month 'Don't Wait – Vaccinate'**

In 2017, the annual National Pharmacy Week in South Africa was, for the first time, extended to a full month. The theme of the 2017 National Pharmacy Month was 'Don't Wait – Vaccinate'. Mr Sibanda was invited to be the guest of honour at the Weskoppies Hospital Pharmacy launch of Pharmacy Month on 4 September 2017. The event was attended by over 40 staff members consisting mostly of nurses, pharmacy staff, hospital management and general administration staff. He delivered a presentation in line with the Pharmacy Month theme, with emphasis on the slogan 'Protect yourself – Protect your family – Protect your Community'. Similarly, Prof. Meyer was invited to speak on behalf of SMU at the Pharmacy Month Opening at Dr George Mukhari Academic Hospital on 8 September 2017. With the target audience being patients, she emphasised the importance of vaccination to protect yourself, your family and your community and the role that pharmacists can play in providing information to patients about vaccination and their daily healthcare needs.



*Mr Mncengeli Sibanda (second from left) and staff from Weskoppies Hospital Pharmacy at the launch of the National Pharmacy Month 'Don't Wait – Vaccinate.'*

### **Capacity Building of SAVIC members**

#### **VACFA's First Workshop on Innovation in the Vaccine Space: "Design thinking" – University of Cape Town, Graduate School of Business, Waterfront, Cape Town, 21–22 June 2017**

Prof. Meyer and Dr Musyoki participated in VACFA's First Workshop on Innovation in the Vaccine Space. This workshop was presented by Vaccines For Africa (Faculty of Health Sciences, UCT), in partnership with the Bertha Centre for Social Innovation and Entrepreneurship, the Hasso Plattner Institute of Design Thinking, Graduate School of Business (UCT) and the National Department of Health. The aim of the workshop was to learn the process and techniques of design thinking in order to develop innovative solutions to the immunisation challenges in South Africa.



*Dr Andrew Musyoki explaining the model designed by his workgroup at VACFA's First Workshop on Innovation in the Vaccine Space: "Design thinking."*



*Mrs Mary Mahole (EPI Manager: North West Province), Prof. Hannelie Meyer and Dr Mercy Kamupira (WHO, South Africa) building models at VACFA's First Workshop on Innovation in the Vaccine Space*

**South African Antimicrobial Stewardship Programme (SAASP) Workshop – Hilton Sandton Hotel, Johannesburg, 24–25 February 2017**

Prof. Meyer attended this workshop with a focus on behaviour change in addressing AMR, with presenters from South Africa, the UK and the USA. The workshop was very interactive and multi-disciplinary, with discussions on the determinants of antibiotic prescribing behaviour; challenges and successes in clinical practice to change behaviour; leadership and communication; and organisational structures and technology to change behaviour and support Antimicrobial Stewardship.

**Foundation Merieux and Université de Genève ADVAC 2017 – Les Pensières, Veyrier-du-Lac (French Alps), near Geneva, 8–19 May 2017**

Dr Musyoki attended this two-week training programme. The programme aimed to facilitate critical decision-making in vaccinology by providing participants with a comprehensive overview of the field, from immunology to vaccine development, clinical trials, and the social, economic, political and ethical issues of vaccination.

**8<sup>th</sup> Africa Pneumococcal Summit – Cape Town, South Africa, 19–20 August 2017**

Prof. Meyer attended the summit, which mainly focussed on the prevention and treatment of pneumococcal disease in children, pregnancy, immunocompromised patients and the elderly. The second day of the summit also included interesting discussions on AMR and the ethical aspects of vaccination.

**SA-SWISS Nanomedicine (TB & HIV/AIDS) – International Convention Centre, CSIR, Pretoria, 5–6 December 2017**

Dr Lebelo attended this symposium, which provided a platform for researchers and industry to showcase groundbreaking academic and industrial research to policymakers, and promoted collaboration in the areas of HIV/AIDS, TB and nanomedicine in South Africa and Switzerland.

**International Master in Vaccinology (IMVACC) – Online course, September 2017**

During 2017, Dr Lebelo and Dr Ledibane were accepted for IMVACC and will be participating in this programme during 2018. IMVACC comprises one year of online teaching of vaccinology followed by a six-month to one-year specialisation internship in a vaccine-related activity, including the preparation of a master's thesis. Graduates will gain a broad knowledge of how vaccines are designed, developed, manufactured and implemented through public health programmes.

**Hepatitis Symposium – Botswana Harvard Institute, Gaborone, Botswana, 14 July 2017**

Dr Lebelo presented on HPV epidemiology in different cancers, based on the results of her research conducted at SMU. This symposium, where researchers, PhD and MSc students from Botswana Harvard Institute and SMU presented their ongoing projects on HBV, HIV and HPV, was organised to establish collaboration between the two intuitions.



Students from the School of Pharmacy with Sr Rose Ndlovu from Tshwane District Health Services at the Vaccination Catch-up Campaign in Soshanguve





## ▶ Ongoing SAVIC network

During 2017, SAVIC signed a Memorandum of Understanding with the East Africa Centre for Vaccines and Immunization (ECAVI). SAVIC and ECAVI share the common goals of promoting and encouraging the use of current vaccines; the uptake of new vaccines; and improved immunisation coverage in eastern and southern Africa, through supporting and promoting (a) epidemiological, laboratory-based and behavioural research in the field of VPDs; (b) training and capacity building of HCWs; (c) adherence to immunisation schedules; and (d) continued research into vaccine development and utilisation of new vaccines in eastern and southern Africa. Since 2004, SAVIC has expanded its network of partners at national, regional and global levels, having collaborated over the years with academics and officials from the following institutions:

### National Higher Education Institutions

#### Free State Province

- University of the Free State

#### Gauteng Province

- National Institute for Communicable Diseases
- Tshwane University of Technology
- University of Pretoria
- University of the Witwatersrand
- University of South Africa

#### KwaZulu-Natal Province

- University of KwaZulu-Natal

#### Limpopo Province

- Limpopo Nursing Colleges: Sovenga and Thohoyandou
- University of Limpopo

#### North West Province

- North-West University

#### Western Cape Province

- Stellenbosch University
- University of Cape Town

### National and Provincial Organisations

- National Department of Health
- Provincial Departments of Health
- South African Military Health Services
- South African Nursing Council
- South African Medical Research Council
- The Democratic Nursing Association of South Africa

### Regional and International Partners

ECAVI, NESI, UNICEF and WHO/AFRO.

# ▶ Annexure 1: Research outputs related to vaccination/vaccine-preventable diseases

## Publications in international peer-reviewed journals

Amponsah-Dacosta E, Selabe SG, **Mphahlele MJ**. Evolution of the serologic and virologic course of occult HBV infection in therapy experienced HIV co-infected patients. *Journal of Medical Virology* 2017; 1–13.

Dochez C, **Burnett RJ**, Mbola Mbassi S, Were F, Musyoki A, Trovoada D, **Mphahlele MJ**. Improving skills and institutional capacity to strengthen adolescent immunisation programmes and health systems in African countries through HPV vaccine introduction. *Papillomavirus Research* 2017; 4:66–71.

Gededzha MP, **Mphahlele MJ**, Blackard JT, Selabe SG. Prevalence of NS5B Resistance Mutations in Hepatitis C Virus (HCV) Treatment Naive South Africans. *Hepatitis Monthly* 2017 June; 17(6):e14248.

Matsitse TB, Helberg E, **Meyer JC**, Godman B, Masele A, Schellack N. Compliance to the Primary Health Care Treatment Guidelines and the Essential Medicines List in the Management of Sexually Transmitted Infections in Correctional Centres in South Africa: Findings and Implications. *Anti-Infective Therapy* 2017 Oct; 15(10):963–972.

**Meyer JC**, Schellack N, Stokes J, Lancaster R, Zeeman H, Defty D, Godman B, Steel G. 2017. Ongoing Initiatives to Improve the Quality and Efficiency of Medicine Use within the Public Healthcare System in South Africa; A Preliminary Study. *Frontiers in Pharmacology* 2017; 8:751.

Operario DJ, Platts-Mills JA, Nadan S, Page N, Seheri M, **Mphahlele MJ**, Praharaj I, Kang G, Araujo IT, Leite JPG, Cowley D, Thomas S, Kirkwood CD, Dennis F, Armah G, Mwenda JM, Wijesinghe PR, Rey G, Grabovac V, Berejena C, Simwaka CJ, Uwimana J, Sherchand JB, Thu HM, Galagoda G, Bonkougou IJO, Jagne S, Tsolenyanu E, Diop A, Enweronu-Laryea C, Borbor SA, Liu J, McMurry T, Lopman B, Parashar U, Gentsch J, Steele AD, Cohen A, Serhan F, Houghton ER. Etiology of Severe Acute Watery Diarrhea in Children in the Global Rotavirus Surveillance Network Using Quantitative Polymerase Chain Reaction. *Journal of Infectious Diseases* 2017;216(2).

Page NA, Seheri LM, Groome MJ, Moyes J, Walaza S, **Mphahlele MJ**, Kahn K, Kapongo CN, Zar HJ, Tempia S, Cohen C, Madhi SA. Temporal association of rotavirus vaccination and genotype circulation in South Africa: Observations from 2002 to 2014. *Vaccine*. 2017 Oct 27; pii: S0264-410X(17)31470–6.

Rahajamanana VL, Raboba JL, Rakotozanany A, Razafindraibe NJ, Andriatahirintsoa EJPR, Razafindrakoto AC, Mioramalala SA, Razaiarimanga C, Weldegebriel GG, Burnett E, Mwenda JM, Seheri M, **Mphahlele MJ**, Robinson AL. Impact of rotavirus vaccine on all-cause diarrhea and rotavirus hospitalizations in Madagascar. *Vaccine*. 2017 Sep 25; pii: S0264-410X(17)31205–7.

Schellack N, Benjamin D, Brink A, Duse A, Faure K, Goff D, Mendelson M, **Meyer J**, Miot J, Perovic O, Pople T, Suleman F, van Vuuren M, Essack S. A situational analysis of current antimicrobial governance, regulation and utilisation in South Africa. *International Journal of Infectious Diseases* 2017; 64:100-106.

Seheri LM, Magagula NB, Peenze I, Rakau K, Ndadza A, Mwenda JM, Weldegebriel G, Steele AD, **Mphahlele MJ**. Rotavirus strain diversity in Eastern and Southern African countries before and after vaccine introduction. *Vaccine*. 2017 Dec 1; pii: S0264-410X(17)31679–1.

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## Publications in national peer-reviewed journals

**Meyer JC**, Nkonde K, Schellack N. Travel medicine: An overview. *South African Pharmaceutical Journal* 2017; 84(6):19–28.

Schellack N, Van der Sandt N, Modau T, Pople T, **Meyer JC**. Travel vaccines: information for health care workers. *South African Family Practice* 2017; 59(2):20–29.

Schellack N, Van der Sandt N, Modau T, Pople T, **Meyer JC**. 2017. Travel vaccines: information for health care practitioners. *Professional Nursing Today*; 21(3):68–78.

Schellack N, Naested C, Schellack G, **Meyer JC**, Motubatse J, Mametja K, Makola F. The management of rotavirus disease in children. *South African Pharmaceutical Journal* 2017; 84(6):46–51.

Engler D, **Sibanda M**, Motubatse HJ. Shingles. *South African Pharmaceutical Journal* 2017; 84(6):42–46.

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## Published technical report

Dochez C, **Burnett RJ**, **Musyoki A**, Trovoada D, **Mphahlele MJ**. Strengthening HPV vaccination and adolescent health programmes in Africa. *World Health Organization Global Immunization News* January 2017, p8. [http://www.who.int/immunization/GIN\\_January\\_2017.pdf?ua=1](http://www.who.int/immunization/GIN_January_2017.pdf?ua=1)

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## Abstract proceedings published in international peer-reviewed journals

Dochez C, **Burnett RJ**, **Mphahlele MJ**. Introduction of a new vaccine into national immunisation programmes in Africa: the role of capacity building. *BMJ Global Health* 2017 suppl 2: A53. doi:10.1136/bmjgh-2016-000260.141 (Proceedings of the Eighth European & Developing Countries Clinical Trials Partnership Forum. Lusaka, Zambia. 6–9 November 2016).

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## Peer-reviewed presentations at international conferences

Bester T, Schellack N, Gous AGS, Stolz A, **Meyer JC**, Godman B. Evaluating initial antimicrobial use in an adult medical intensive care unit at an academic teaching hospital in Pretoria, South Africa. EuroDURG (European Drug Utilisation Research Group) Conference. Technology & Innovation Centre, University of Strathclyde, Glasgow, UK. 15–17 November 2017.

Dlamini NN, Schellack N, **Meyer JC**, Godman B. Point prevalence survey of antimicrobial utilisation in an academic hospital in the Gauteng province. EuroDURG (European Drug Utilisation Research Group) Conference. Technology & Innovation Centre, University of Strathclyde, Glasgow, UK. 15–17 November 2017.

Dochez C, **Burnett RJ**, **Mphahlele MJ**. Improving skills and institutional capacity to strengthen adolescent immunisation programmes and health systems in African countries through HPV vaccine introduction. HPV 2017; 31<sup>st</sup> International Papilloma Conference. Cape Town International Convention Centre, Cape Town, South Africa. 28 February–4 March 2017.

**Lebelo RL**, Mashishi T, Tiiti T, **Nkwinika VV**, Selabe SG. HPV mRNA expression and HPV DNA prevalence in women attending gynaecology clinics at DGMAH, Pretoria. 7<sup>th</sup> Federation of Infectious Diseases Societies of Southern Africa Conference. Century City Conference Centre and Hotel, Cape Town, South Africa. 9–11 November 2017.

**Lebelo RL**. HPV prevalence in MSM population from North West of Pretoria. 4<sup>th</sup> WAKA HPV AFRICA symposium, 31<sup>st</sup> International Papillomavirus Conference. Cape Town International Convention Centre, Cape Town, South Africa. 28 February–4 March 2017.

**Lebelo RL**, Dlamini NS, Ratlabala B, Bida MN, **Nkwinika VV**, **Mphahlele MJ**. Human papillomavirus prevalence in anal carcinoma cases from Dr George Mukhari Academic Hospital, Pretoria, South Africa. 31<sup>st</sup> International Papillomavirus Conference. Cape Town International Convention Centre, Cape Town, South Africa. 28 February–4 March 2017.

**Lebelo RL**, Thys S, Benoy I, Depuydt C, Bogers JP, **Mphahlele MJ**. Identification of human papillomavirus types causing lesions in penile cancerous, pre-cancerous and benign lesions using laser microdissection. 31<sup>st</sup> International Papillomavirus Conference. Cape Town International Convention Centre, Cape Town, South Africa. 28 February–4 March 2017.

Massele A, Afriyie D, Burger J, Ezenduka C, Fadare J, Kalungia A, Kibuule D, **Meyer JC**, Ogunleye O, Oluka M, Truter I, Godman B. African countries are working together to enhance medicine use. HTAi's 14<sup>th</sup> Annual Meeting. Ergife Palace Hotel, Rome, Italy. 17–21 June 2017.

Matsitse TB, Helberg E, **Meyer JC**, Godman B, Massele A, Schellack N. Compliance to the Primary Health Care Treatment Guidelines and the Essential Medicines List in the Management of Sexually Transmitted Infections in Correctional Centres in South Africa: Findings and Implications. 3<sup>rd</sup> MURIA Group Symposium and Training Workshop. University of Namibia, Windhoek. 26–28 June 2017.

Matsitse TB, Helberg E, **Meyer JC**, Godman B, Massele A, Schellack N. Compliance to the Primary Health Care Treatment Guidelines and the Essential Medicines List in the Management of Sexually Transmitted Infections in Correctional Centres in South Africa: Findings and Implications. EuroDURG (European Drug Utilisation Research Group) Conference. Technology & Innovation Centre, University of Strathclyde, Glasgow, UK. 15–17 November 2017.

Nemarude L, Mashishi T, Tiiti T, Selabe SG, Bogers JP, Nchabeleng M, **Lebelo RL**. HPV infections and co-infection with selected sexually transmitted infections in women attending DGMAH, Pretoria, South Africa. 7<sup>th</sup> Federation of Infectious Diseases Societies of Southern Africa Conference. Century City Conference Centre and Hotel, Cape Town, South Africa. 9–11 November 2017.

**Nkwinika VV**, Dlamini NS, **Lebelo RL**, Ratlabala B, Bida M. The prevalence of human papillomavirus infections in anorectal cancers at the Dr George Mukhari Academic Hospital from 2005 to 2012. 7<sup>th</sup> Federation of Infectious Diseases Societies of Southern Africa Conference. Century City Conference Centre, Cape Town, South Africa. 9–11 November 2017.

Nunu S, Fernandes L, De Schryver A, **Burnett RJ**. A baseline study of hospital policies for hepatitis B vaccination of healthcare workers in Botswana in 2012. 11<sup>th</sup> Vaccine Congress. Paradise Point, San Diego, United States of America. 17–20 September 2017.

Schellack N, Benjamin D, Brink A, Duse A, Faure K, Goff D, Mendelson M, **Meyer JC**, Miot J, Perovic O, Pople T, Suleman F, Van Vuuren M, Essack S. A situational analysis of current antimicrobial governance, regulation and utilisation in South Africa. EuroDURG (European Drug Utilisation Research Group) Conference. Technology & Innovation Centre, University of Strathclyde, Glasgow, UK. 15–17 November 2017.

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## Peer-reviewed presentations at national conferences

Nunu S, Fernandes L, De Schryver A, **Burnett RJ**. A baseline study of hospital policies for hepatitis B vaccination of healthcare workers in Botswana in 2012. Public Health Association of South Africa Conference 2017. Indaba Hotel, Johannesburg. 4–7 September 2017.

Dlamini NN, Schellack N, **Meyer JC**, Godman B. Point prevalence survey of antimicrobial utilisation in an academic hospital in the Gauteng province. 7<sup>th</sup> Annual Conference of the South African Society of Clinical Pharmacy. Birchwood Hotel, Johannesburg, South Africa. 8–11 June 2017.

Naested C, Schellack N, **Meyer JC**. Review of antimicrobial treatment in a medical ward of a private hospital. 7<sup>th</sup> Annual Conference of the South African Society of Clinical Pharmacy. Birchwood Hotel, Johannesburg, South Africa. 8–11 June 2017.

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Makua KS, **Lebelo RL** and Wood NH. Oral human papillomavirus infection and associated risk factors in oral/oropharyngeal mucosa of adults attending Sefako Makgatho Health Sciences Oral Health Centre, Pretoria. Sefako Makgatho Health Sciences University 3<sup>rd</sup> Research Days 2017. Sefako Makgatho Health Sciences University, Pretoria. 22–24 August 2017.

**Musyoki AM**, Poopedi E, Newton C and **Maluleka C**. The first ever report on *Haemophilus influenzae* carriage in children attending the Dr George Mukhari Academic Hospital: A big boost for Hib vaccination. Sefako Makgatho Health Sciences University 3<sup>rd</sup> Research Days 2017. Sefako Makgatho Health Sciences University, Pretoria. 22–24 August 2017.

**Nkwinika VV**, Dlamini NS, **Mphahlele MJ**, Rabatlala B, Bida M, and **Lebelo RL**. Prevalence of human papillomavirus infections in anorectal cancers at the Dr George Mukhari Academic Hospital from 2005 to 2012. Sefako Makgatho Health Sciences University 3<sup>rd</sup> Research Days 2017. Sefako Makgatho Health Sciences University, Pretoria. 22–24 August 2017.

Nunu S, Fernandes L, De Schryver A, **Burnett RJ**. A baseline study of hospital policies for hepatitis B vaccination of healthcare workers in Botswana in 2012. Sefako Makgatho Health Sciences University 3<sup>rd</sup> Research Days. Sefako Makgatho Health Sciences University, Pretoria, Pretoria. 22–24 August 2017.

## Unpublished technical reports

DigitLab on behalf of SAVIC. Anti-vaccination lobbying research project results for 1 December 2017 to 31 May 2017.

DigitLab on behalf of SAVIC. Anti-vaccination lobbying research project results for 1 June to 31 December 2017.

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## Keynote/plenary/guest speaker/course/workshop presentations

**Burnett RJ.** Hepatitis B vaccination of healthcare workers. Vaccinology 2017. Mount Grace Country House, Magaliesberg. 1–3 October 2017.

**Burnett RJ.** Training of vaccinators: the relevance of continuous training in Africa – experience from South Africa. 13<sup>th</sup> Annual African Vaccinology Course of Vaccines for Africa, UCT. Southern Sun Newlands, Cape Town. 13–17 November 2017.

**Burnett RJ.** Introduction to advocacy, communication and social mobilisation in order to increase vaccination uptake. SAVIC Vaccinology Short Course 3: Modules 7, 9 and 10. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 19–20 April 2017.

**Burnett RJ.** Introduction to vaccinology. SAVIC Vaccinology Short Course 1: Modules 1–4. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 25–26 May 2017.

**Burnett RJ.** Introduction to the Expanded Programme on Immunisation. SAVIC Vaccinology Short Course 1: Modules 1–4. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 25–26 May 2017.

**Burnett RJ.** Introduction to advocacy, communication and social mobilisation in order to increase vaccination uptake. SAVIC Vaccinology Short Course: Modules 7, 9–11. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 23–24 November 2017.

**Maluleka C.** Introduction to the epidemiology of bacterial vaccine-preventable diseases. SAVIC Vaccinology Short Course: Modules 5, 6 and 8. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 17–18 August 2017.

**Maphoto R.** Introduction to the epidemiology of viral vaccine-preventable diseases. SAVIC Vaccinology Short Course: Modules 5, 6 and 8. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 17–18 August 2017.

**Meyer JC.** Introduction to cold chain management. SAVIC Vaccinology Short Course: Modules 7, 9, 10 and 11. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 19–20 April 2017.

**Meyer JC.** Introduction to adverse events following immunisation. SAVIC Vaccinology Short Course: Modules 7, 9, 10 and 11. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 19–20 April 2017.

**Meyer JC.** Introduction to vaccine manufacture and distribution. SAVIC Vaccinology Short Course: Modules 1–4. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 25–16 May 2017.

**Meyer JC.** Vaccines against viral and bacterial vaccine-preventable diseases. SAVIC Vaccinology Short Course: Modules 5, 6 and 8. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 17–18 August 2017.

**Meyer JC.** Introduction to cold chain management. SAVIC Vaccinology Short Course: Modules 7, 9, 10 and 11. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 23–24 November 2017.

**Meyer JC.** Introduction to adverse events following immunisation. SAVIC Vaccinology Short Course: Modules 7, 9, 10 and 11. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 23–24 November 2017.

**Musyoki AM.** Introduction to the immune response against infectious diseases. SAVIC Vaccinology Short Course: Modules 1–4. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 25–16 May 2017.

**Musyoki AM.** Overview of vaccine-related research. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 20 September 2017.

**Musyoki AM, Razwiedani L.** Introduction to the monitoring and evaluation of vaccination programmes. SAVIC Vaccinology Short Course: Modules 7, 9, 10 and 11. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 23–24 November 2017.

**Selaledi BM.** Introduction to vaccination schedules and the safe administration of vaccines. SAVIC Vaccinology Short Course: Modules 5, 6 and 8. Sefako Makgatho Health Sciences University, Pretoria, South Africa. 17–18 August 2017.

Schellack N, **Meyer JC.** Medication Errors - Esprit De Corps. Medication Errors Symposium. Garden Court Hotel, Eastgate. 5 December 2017.

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## Conference/course/workshop attendance for self-development (no presentations made)

**Lebelo RL.** Symposium on nanomedicine focusing on TB and HIV/AIDS. CSIR International Convention Centre (ICC), Ruby Auditorium, Meiring Naude Rd, Brummeria, Pretoria. 5–6 December 2017.

**Lebelo RL.** Research methods workshop. Bentley's Country Lodge, Pretoria North. 10–11 August 2017.

**Maphoto R.** HIV Summer School, European AIDS Clinical Society, Montpellier, France.

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## Publications in lay journals/magazines

**Burnett RJ.** Are vaccinations critical for Seniors? *YE! You've earned it.* 2017; March 29 Newsletter. <http://youve-earned-it.co.za/healthcare/vaccinations-critical-seniors/>

**Burnett RJ.** Essential vaccines for senior citizens. *Immunise Today.* 2017; 8(2):2.

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## Postgraduate students supervised in 2017

### PhD students:

**Name:** Prof. Neil Wood  
**Title:** Prevalent human papillomavirus genotypes in oropharyngeal of HIV-sero-positive and HIV-sero-negative South Africans  
**Supervisor:** **Dr Lisbeth Lebelo**  
**Co-supervisor:** Prof. John-Paul Bogers

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**Name:** Ms Teboho Tiiti  
**Title:** Acceptance and attitude of women on self-sampling and the sensitivity of self-collected and doctor collected samples for HPV testing  
**Supervisor:** **Dr Lisbeth Lebelo**

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**Name:** Mrs Eloise Botha (North West University)  
**Title:** South African consumers' infant vaccination decisions: constructing a model in consumer sciences  
**Supervisor:** Prof. Daleen van der Merwe (North West University)  
**Co-supervisor:** **Prof. Rose Burnett**

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### MPharm students:

**Name:** Mr Nkuke Montwedi  
**Title:** Investigation of vaccination coverage of children aged 12–23 months in Region 5 of Tshwane, Gauteng Province  
**Supervisor:** **Prof. Hannelie Meyer**  
**Co-supervisor:** **Prof. Rose Burnett**

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**Name:** Ms Moreblessing Michelle Matsangaise  
**Title:** A profile of vaccination sentiments on online news forums, Twitter, and other microblogs in South Africa  
**Supervisor:** **Prof. Hannelie Meyer**  
**Co-supervisor:** **Prof. Rose Burnett**

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**Name:** Mr Thulani Motha  
**Title:** Investigation of vaccination uptake and use in children under the age of 13 years at primary healthcare facilities in the Bojanala District, North-West Province  
**Supervisor:** **Mr Mncengeli Sibanda**  
**Co-supervisor:** **Prof. Hannelie Meyer**

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**Name:** Mr Byron Chukwu  
**Title:** Seasonal influenza and hepatitis B vaccination uptake amongst healthcare workers in primary healthcare facilities in the Bojanala District, North-West Province  
**Supervisor:** **Mr Mncengeli Sibanda**  
**Co-supervisor:** **Prof. Hannelie Meyer**

---

**Name:** Mr Freddy Makola  
**Title:** Rotavirus vaccine uptake amongst paediatric patients attending public sector community health centres in South Africa: A point prevalence survey  
**Supervisor:** Ms L. Malan  
**Co-supervisor:** **Prof. Hannelie Meyer** and Prof. Natalie Schellack

#### MPH student:

**Name:** Ms Tracy Milondzo (University of Limpopo)  
**Title:** Knowledge, attitudes and practices regarding human papillomavirus vaccination among caregivers of girls attending private schools in South Africa  
**Supervisor:** **Prof. Rose Burnett**  
**Co-supervisor:** Prof. Linda Skaal (University of Limpopo)

#### MSc students:

**Name:** Ms Tebogo Mashishi  
**Title:** Prevalence of human papillomavirus genotypes associated with pre-cancerous and cancerous cervical lesions and invasive cervical cancer among women attending the gynaecology clinic at George Mukhari Academic Hospital  
**Supervisor:** **Dr Lisbeth Lebelo**  
**Co-supervisor:** Prof. Gloria Selabe

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**Name:** Mr Koketso Makua  
**Title:** Investigation of human papillomavirus infection in oral/oropharyngeal mucosa of adult patients attending Sefako Makgatho Health Sciences University Oral Health Centre, Pretoria  
**Supervisor:** **Dr Lisbeth Lebelo**  
**Co-supervisor:** Prof. Neil Wood

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**Name:** Mr Fulufhelo Matshonyonge  
**Title:** HPV prevalence and factors associated with HPV related precancerous and cancerous lesions in the MSM population residing in the North West of Pretoria  
**Supervisor:** **Dr Lisbeth Lebelo**  
**Co-supervisor:** Prof. Gloria Selabe

---

**Name:** Ms Varsatile Nkwinika  
**Title:** Investigation of human papillomavirus viral load and messenger ribonucleic acid expression as predictors of progression to cervical cancer in women attending the gynaecology clinic at the Dr George Mukhari Academic Hospital  
**Supervisor:** **Dr Lisbeth Lebelo**  
**Co-supervisor:** Mr Nare Rakgole

## **Awards and recognition in 2017**

### **National Advisory Board appointments during 2017:**

**Burnett RJ.** National Advisory Group on Immunisation. Appointed by the Minister of the National Department of Health.

**Meyer JC.** National Immunisation Safety Expert Committee. Appointed by the Minister of the National Department of Health.

### **External examiner and other external university appointments during 2017:**

**Burnett RJ.** Advisory Committee of Vaccines for Africa Initiative (VACFA) at the University of Cape Town.

**Lebelo RL.** External examiner: MSc dissertation: Ms J Jewanraj. Multiple concurrent HPV infections, oncogenicity, and STI co-infection as risk factors for HIV acquisition. University of KwaZulu-Natal.

### **Other appointments during 2017:**

**Meyer JC.** Executive Committee Member of the National Vaccinators Forum.

### **Awards during 2017:**

**Lebelo RL:** Best Oral Presentation. 7<sup>th</sup> Federation of Infectious Diseases Societies of Southern Africa Conference. Century City Conference Centre and Hotel, Cape Town, South Africa. 9–11 November 2017.

**Nkwinika VV:** Third prize for best postgraduate student poster at the Sefako Makgatho Health Sciences University Research Day, August 2017.





MPharm students with Dr Moliehi Matlala (right) from the School of Pharmacy at the Vaccination Catch-up Campaign in Mabopane

## ▶ Acknowledgements

### **SAVIC would like to acknowledge the contributions of the following:**

Past and present MEDUNSA and University of Limpopo, Medunsa Campus staff members who were involved in SAVIC from the outset.

The Department of Epidemiology and Social Medicine, University of Antwerp, who were involved in the Flemish Interuniversity Council-funded Own Initiative Project, "Improvement of the health of future generations by strengthening infant immunisation programmes in South Africa", from which SAVIC originated. This was an inter-university project between MEDUNSA and the University of Antwerp and the EPI-SA of the NDoH, the goals of which were to enhance MEDUNSA's institutional strength and capacity in the field of VPDs and immunisation, and to strengthen the immunisation programmes in three provinces in South Africa, namely Gauteng, North West and Limpopo. SAVIC was recognised and acknowledged as a centre of excellence by MEDUNSA's Executive Management in August 2003.

Funding, donations and in-kind donations that were received from:

#### **Current funding and donations**

- 2003–present: MEDUNSA/University of Limpopo, Medunsa Campus/SMU
- 2005–present: Sanofi Pasteur
- 2012–present: NESI

- 2015–present: National Research Foundation of South Africa
- 2015–present: Flemish Interuniversity Council
- 2015–2017: SAMRC
- 2016–present: SMU Research Development Grant
- 2017–present: GSK

#### **Previous funding**

- 2015: The Biovac Institute
- 2015–2016: Roche
- 2014–2016: Flemish Government
- 2012–2015: Aspen Pharmcare/GSK
- 2009–2010: WHO
- 2008–2010: GSK
- 2007–2009: Wyeth and Becton Dickinson
- 2006: Pfizer Laboratories
- 2003–2012: Flemish Interuniversity Council

*SAVIC receives unrestricted educational grants towards its annual activities from the vaccine industry and NESI. The Sefako Makgatho Health Sciences University provides funding towards administration, management and some research activities. Additional funds are raised during the organisation of meetings from various stakeholders. SAVIC practices strict operational and scientific independence. None of the sponsors are involved in the strategic objectives of SAVIC, and SAVIC declares that its operations, unless otherwise acknowledged, are independent of sponsors.*







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