



SEFAKO MAKGATHO
HEALTH SCIENCES UNIVERSITY

Data Driven Surgery 2025

Meet the Speakers, Panellists and
Facilitators

Marlien Herselman

Prof Marlien Herselman is a Chief Researcher at the CSIR, where she works in the Technology Implementation Monitoring and Evaluation (TIME) Research Group. She was the founder of the Living Labs Network in Southern Africa (LLISA) from 2009 to 2014 and its chairperson until then. Her strong point is research methodology, especially design science. She has experience in strategy development, ICT4D research, H2020 projects and innovation. She is working on national and international projects and has over 20 years of experience as a supervisor and academic. She is affiliated with various universities as an adjunct professor in information systems and industrial engineering. Prof Herselman served as the South African Lead for H2020-Gender Equality in Science, Technology, and Innovation and on the H2020 project DESCA-ToBE, titled "Towards a Sustainable Well-being Economy: Integrated Policies and Transformative Indicators." In 2023, she became the Monitoring and Evaluation (M&E) Lead on the Centres for Disease Control and Prevention (CDC) (USA) project with the National Department of Health, South Africa, on developing and implementing the Electronic Medical Record (EMR) system for South Africa. Her collaborations with the South African National Department of Health resulted in a book focusing on the emerging South African digital health system, which will soon be available on the NDoH webpage. She is one of the book's editors and co-authored four chapters. She is an NRF B3-rated researcher with a Google Scholar h-index 30.

Cherinet Osebo

Dr Cherinet Osebo is a U.S. resident, clinician-scientist, and postdoctoral fellow at Stanford University's Division of Primary Care and Population Health. Originally from Ethiopia, he completed postgraduate training in Integrated Emergency Surgery to provide critical surgical care in remote regions. He later earned a PhD in Global Surgery from McGill University, Canada. Dr Osebo is one of the awardees of the highly competitive and prestigious 2025-2026 National Institutes of Health (NIH) Fogarty Global Health Emerging Scholar (GHES) Fellowship. His research focuses on strengthening trauma systems, surgical capacity, and data-driven quality improvement in low- and middle-income countries. Dr. Osebo led the establishment of trauma and operating room registries across Tanzania, Senegal, and Nunavik (Canada), and is expanding this work to Ethiopia and Rwanda. His work has been published in leading peer-reviewed journals, shaping policy on surgical access through real-time data, and he collaborates globally to advance equitable surgical care and policy reform in underserved regions.

Zane Farina

Dr Zane Farina is Head of the Clinical Department of Anaesthesia at Grey's Hospital and Deputy Head of Clinical Services for Anaesthesiology and Critical Care at the University of KwaZulu-Natal. With extensive leadership experience across provincial and national structures, he has contributed to maternal health policies, drug-procurement decision-making, clinical governance, and equipment standards. He serves on the WFSA Sustainability Committee and is a long-standing examiner for the FCA exams. Dr Farina's research spans perioperative outcomes, maternal anaesthesia, trauma care and environmental sustainability, and he has contributed to major national guidelines. His work continues to shape training, safety, and system improvement in South African anaesthesia.

Thifhelimbilu Luvhengo

Adjunct Professor Thifhelimbilu Emmanuel Luvhengo is the Clinical Head of the Department of Surgery at Charlotte Maxeke Johannesburg Academic Hospital and an Adjunct Professor in the School of Clinical Medicine at the University of the Witwatersrand. A specialist surgeon with over 25 years of academic and clinical leadership across Gauteng and Pretoria, he has trained more than 50 registrars annually and supervised extensive postgraduate research. His scholarly work spans patient safety, surgical quality improvement, endocrine surgery, soft-tissue sarcoma, and cancer in adolescents and young adults, with more than 60 peer-reviewed publications and multiple book chapters. Prof Luvhengo also contributes nationally through accreditation work, curriculum development, examination standard-setting and health-system advisory roles.

Nonkululeko Boikhutso

Dr Nonkululeko Boikhutso is a specialist in Public Health Medicine, currently working as the CEO of the Nelson Mandela Children's Hospital for the past 4 years. Her 20 year career in healthcare has been primarily in the public health sector inspired by her deep desire to serve vulnerable communities. Dr. Boikhutso actively supports child health initiatives as the Vice Chairperson of the CHOC Childhood Cancer Foundation, a non-executive Director of Ronald McDonald House Charities, a Trustee of Phambile Trust for Tertiary Education, and a member of the Cancer Alliance. She also offers her expertise to public benefit organisations that share her mission of enhancing the lives of children and youth. As a beneficiary herself of the philanthropic efforts of others, she deeply appreciates that children's health outcomes are intricately linked to their lives beyond the Hospital walls. Dr. Boikhutso received an award from the Future of Leadership Forum, highlighting her contributions to the public sector.

Rami Riman

Dr Rami Riman is the Director of Clinical and Business Improvements, EMEA, Intersystems. He supports health organisations in optimising workflows, improving patient safety and driving adoption of digital systems. He brings extensive experience in healthcare IT, clinical workflow optimisation, professional accreditation and change management. Prior to his technology career, Dr Riman spent a decade practising medicine across the US, UK, Lebanon and the UAE. He holds a BA in Biology from the American University of Beirut and a Doctor of Medicine from St. George's University School of Medicine, and is board-certified in Internal Medicine and Medical Oncology.

William Mapham

Dr William Mapham is a medical doctor, ophthalmologist and health innovator committed to improving access to care across Africa. He is the founder and CEO of Vula Medical, a digital platform that connects frontline health workers with specialists to streamline referrals and clinical advice. Since its launch in 2014, Vula has supported over 2.2 million patients and built a network of more than 40,000 health workers in the public and private sectors. His clinical work in South Africa and Eswatini shaped his interest in low-resource eye care and inspired the original Vula Eye Health App. He has worked in public health and behaviour change communication at the Soul City Institute and the Reproductive Health and HIV Research Unit at Wits, and has published widely on mobile health, eye care, TB diagnosis, and social entrepreneurship.

Shrikant Peters

Dr Shrikant Peters is a Public Health Physician and Medical Manager at Groote Schuur Hospital, where he oversees peri-operative, critical care and emergency service portfolios, infection prevention and control, and clinical informatics. He also serves as an Honorary Lecturer in Public Health Medicine at the University of Cape Town and is an Associate Editor for BMJ Leader and the Journal of the Colleges of Medicine of South Africa. Dr Peters trained as a Public Health Medicine registrar in the Western Cape. His research and publications focus on antibiotic stewardship, health-system reform, COVID-19 service reorganisation, childhood injury epidemiology and critical-care system readiness. Dr Peters holds an MBChB, Master of Medicine, Master of Public Health, Diplomas in Health and Occupational Health Management, and is a Fellow of the College of Public Health Medicine.

Richard Crawford

Dr Richard A. Crawford is a Specialist General Surgeon and Trauma Surgery Fellow at Chris Hani Baragwanath Hospital, and a Lecturer at the University of the Witwatersrand. With a commitment to advancing Acute Care and Trauma Surgery, Dr. Crawford advocates for universal access to quality surgical care, especially in underserved areas. After completing his MBBCh at WITS, he specialized further, earning a Diploma in Emergency Medicine (DipPEC) and a Master's in Surgery (MMED), where he received the prestigious Miller Award for Research. In 2022, he obtained his Fellowship in Surgery (FCS) from the College of Medicine South Africa. He has successfully completed the Executive Leadership in Global Surgery from the University of Cape Town Graduate School of Business. He serves as National Hub Director and Statistical Hub Member for the NIHR Global Surgery Research Unit, South Africa, and actively contributes to the Association of Surgeons of South Africa. He is part of the SA Safe Surgical Care technical working group and a member of the Global Surgery Umbrella, supporting initiatives for equitable surgical access. Dr. Crawford's work reflects his dedication to developing the next generation of surgeons and expanding healthcare capacity in low-resource settings.

Alwyn Kotze

Dr Alwyn Kotze is a Consultant Anaesthetist at Leeds Teaching Hospitals NHS Trust with a strong focus on clinical pathway improvement, digital health innovation and applied AI in healthcare. He works across academic and industry collaborations, supervising PhD candidates within the UK Centre for Doctoral Training in AI in Healthcare at the University of Leeds and the Alan Turing Institute. Dr Kotze has experience in developing clinical digital tools that enhance patient outcomes and system efficiency. His interests include AI-driven decision support, clinical workflow optimisation and technology-enabled care redesign.

Noluthando Ndlovu

Noluthando Ndlovu is a Programme Manager at the Health Systems Trust, leading research and implementation science initiatives that strengthen health system performance and data-driven decision-making in South Africa. With a background in public health, health information systems, and strategic communication, she also leads the development of the District Health Barometer and drives efforts to enhance data use for planning, equity, and accountability across the health sector. Noluthando is passionate about translating evidence into action, advancing people-centred care, and supporting innovative, sustainable approaches to health system improvement.

Risenga Chauke

Prof Risenga Frank Chauke is a distinguished South African Cardiothoracic Surgery expert, a medical teacher, a leader, and a passionate health equity advocate with an MBChB from the Medical University of Southern Africa (MEDUNSA), a Master of Medicine in Cardiothoracic Surgery, Associate of the Cardiothoracic Surgeons of the Colleges of Medicine of South Africa, an MBA from the Gordon Institute of Business Science (GIBS-University of Pretoria), Training to Teach in Medicine certificate from Harvard Medical School (HMS) and Learning Facilitator from the Assessment College of South Africa. Prof. Chauke's academic journey is not just extensive but also a testament to his expertise and dedication. He is a professional director from the Directors Association and holds a certificate in healthcare innovation and digital transformation from UAB Medicine and SMU. He served as the Head of the Cardiothoracic Surgery Department at Sefako Makgatho Health Sciences University and Dr George Mukhari Academic Hospital complex, from 2005 to 2025. He served as the Deputy Dean of the School of Medicine at Sefako Makgatho Health Sciences University, a position he has held since 2019, where in between, he served as Acting Dean. He has been appointed as the Dean of the School of Medicine at SMU, assuming the position on October 1, 2025. He serves on numerous committees and professional boards, including the HPCSA, SACOMD, CMSA, SACAA Aeromedical Committee, SAMA as the president for two consecutive years, and TEASA, among others. He also serves in the clinical advisory committee of the Gauteng MEC for Health, the Honourable Nkomo-Ralehoko, as the deputy chair of that committee. He has published papers in national and international journals.

Matt Zylstra

Matthew Zylstra is a seasoned healthcare actuary with over 25 years of experience in healthcare benefit pricing, claims analysis, risk-adjusted efficiency comparisons, predicting healthcare outcomes and the development of clinical groupers and classification tools for analytics. He currently leads a multidisciplinary team of senior professionals dedicated to the research, development and maintenance of clinical groupers and classification tools for healthcare analytics. These tools empower actuaries, statisticians and data scientists to conduct risk-adjusted efficiency and quality assessments, analyse clinical claims, build risk-adjusted provider profiles and design alternative reimbursement contracts that align provider incentives with actuarial risk-sharing. Matt has a strong interest in clinical coding terminologies and ontologies, and their application in clinical analytics and predictive modelling.

Liza Street

Dr Liza Street is a South African paediatrician and health-tech entrepreneur committed to closing the gap between everyday clinical practice and modern digital healthcare solutions. After qualifying in 2013, Dr. Street spent seven years in private practice at Sandton Mediclinic, caring for infants, children, and adolescents with diverse medical needs. During this time, she repeatedly encountered the challenges of incomplete and disconnected patient records. This experience sparked her move into health technology. In 2020, she founded Ajuda, a preventative care and school health screening initiative that helps identify physical and mental health issues earlier in a child's life. Dr. Street now serves as a co-founder of Mammoth Health Information Exchange. She leads national efforts to connect healthcare data across South Africa, giving clinicians seamless access to the information they need to support more accurate decisions and safer care. This kind of interoperability is becoming central to high-quality surgical and perioperative practice. She also contributes her time as a volunteer board member for AKSA (Arthritis Kids South Africa), where she advocates for better support and treatment for children living with juvenile arthritis.

John Biggs

Dr John J.C. Biggs is a consultant anaesthetist involved in clinical systems analysis specialising in perioperative medicine, AI-enabled medical innovation and data-driven interoperability to improve safety, efficiency and governance across the surgical continuum. He holds an MBChB (Pretoria), MMed Anaesthesia (Pretoria) and FCA (SA), and brings hands-on clinical experience to technology implementation and evaluation. Dr Biggs is founder of Periopp, Somnia, and Health Digital Solutions. He is also involved in Harvard Leading AI innovation in Healthcare and Vivenity Intelligence.

Nadine Harran

Dr Nadine Harran holds qualifications spanning MBBCh (Wits), FCS (SA), MMed (Surg), Cert Gastroenterology (SA) Surg, Dr Harran specialises in a wide range of colorectal procedures, from surgery for colorectal cancer to advanced endoscopy. Her passion for minimally invasive techniques, including laparoscopic and robotic surgery, keeps her at the forefront of medical advancements. Dr Harran's career includes prestigious international fellowships in the Netherlands, UK, and Spain, and she is a leader in system development and surgical innovation at WDGMC, empowering South Africa to showcase its world-class healthcare on a global stage. She says, "The systems we are implementing to collect and analyse outcomes will empower us to demonstrate the exceptional care we deliver to our population." Outside the operating room, Dr Harran is a devoted wife, mother of two, and an avid reader.

Brad Beira

Prof Bradley Beira is Secretary General of World Federation of Chiropractic and a chiropractor, corporate executive and medicolegal expert with 24 years of clinical, ethics, lecturing and teaching, executive management, governance, leadership, legal and strategy experience. Since 1996, he has been in clinical practice, worked with international sporting teams, lectured on professional conduct for practitioners across the healthcare landscape and acted as part of the FIFA 2010 risk team. He has been actively involved in advising the health sector globally, headed the international enterprise and health risk management practices for two multi-national organisations and facilitated the design and implementation of Governance and Strategy solutions for organizations in more than 127 cities across 65 countries. He holds an MTech Chiropractic, ICSSD, BCom Law, LLM (UK) and advanced training in global health, bioethics and enterprise risk management.

Elizabeth Schaafsma

Elizabeth Schaafsma is the Project Director at the South African Heart Association, a role she has held since 2006. With a background in Geology and Zoology from Rhodes University, she has extensive experience in managing scientific, clinical and professional projects across the cardiovascular health sector. Elizabeth coordinates national initiatives, supports research-aligned activities and facilitates collaboration between clinicians, researchers and partner organisations. Her longstanding leadership within SA Heart reflects her commitment to strengthening cardiovascular health systems, professional development and association governance in South Africa.

Tim Hardcastle

Prof Timothy Hardcastle is a Trauma and Critical Care Surgeon and Director of Trauma & Burns at Inkosi Albert Luthuli Central Hospital in Durban. He is an Adjunct Associate Professor at the University of KwaZulu-Natal and Provincial Head of Trauma and Burns for the KZN Department of Health. His PhD focused on trauma systems in low- and middle-income countries, and he serves on several national and international expert panels, including WHO working groups. Prof Hardcastle is widely published, with over 250 peer-reviewed articles, multiple book chapters and extensive contributions to trauma education and ethics. He supervises Master's and PhD candidates and is recognised as one of UKZN's top health-science researchers

Phillip Webster

Dr Phillip Webster is an orthopaedic upper-limb surgeon and healthcare consultant, currently serving as a Visiting Consultant to the School of Clinical Medicine at the University of the Witwatersrand. As former private-practice surgeon, he is recognised for his leadership in shoulder arthroscopy education, having chaired major SAOA conferences and contributed as faculty internationally. Phillip has played a key role in digital transformation initiatives in healthcare and volunteered in the B4SA COVID-19 vaccine rollout. He is a past President of both the South African Orthopaedic Association and the South African Shoulder & Elbow Surgeons Society. He continues to support clinical training and healthcare-system strengthening.

Astrid Ellaya

Dr Astrid Ellaya is a Medical Doctor with a Higher Diploma in General Surgery and a Digital Health Application Specialist at Mediclinic Southern Africa. Her clinical background spans general surgery, patient safety, hospital medicine and public health. She is currently pursuing a Master's in Public Health with the London School of Hygiene & Tropical Medicine. Dr Ellaya specialises in digital-health implementation, clinical-workflow optimisation and technology-enabled care delivery. She brings experience from both public and private healthcare settings and has a strong interest in leveraging digital tools to improve patient outcomes and system efficiency.

Ntuthuko Bhengu

Dr Ntuthuko Bhengu is the founder of Alchemy Health Technologies and a leading health-policy advisor specialising in health-financing, data systems and governance. He serves as a National Planning Commissioner and has held board roles at Afrigen Biologics, Busamed Hospital Group, Platinum Health and previously on the AWS South Africa Innovators Board. Dr Bhengu was a panelist on the national Health Market Inquiry and is a Chartered Director (SA). Clinically trained as an anaesthetist, he holds an MBA from Cardiff and an MPH in Healthcare Management from Harvard. He is a recognised speaker at global institutions including Harvard GH Institute, Imperial College and GIBS.

Bruce Biccard

Prof Bruce Biccard is the Nuffield Professor of Anaesthetic Science at the University of Oxford. His research interests include perioperative medicine, perioperative outcomes and global surgery. He is a proponent of international collaborative research. He collaborates with the African Perioperative Research Group (APORG) which has delivered the African Surgical Outcomes Study (ASOS), the ASOS-2 Trial, the African Covid-19 Critical Care Outcomes Study (ACCCOS), the African Surgical Outcomes Study in Paediatric patients (ASOS-Paeds), and the African Critical Illness Outcomes Study (ACIOS). He is the co-Lead for the NIHR Global Health Group on Perioperative and Critical Care. He is a National Research Foundation (NRF) A-Rated Scientist. Bruce has published a book titled 'Safer surgery for Africa: Challenges and Solutions'.

Brian Pandaram

Dr Brian Pandaram is a neuro-intensivist with a certification in clinical care and intensive care medicine. He is the Head of the Clinical Unit in the Department of Neurosurgery at Sefako Makgatho Health Sciences University (SMU) and Dr George Mukhari Academic Hospital (DGMAH). His main research interests include traumatic brain injury and related critical-care outcomes.

Sandy Hadebe

Sandy Hadebe is an MSc (Medicine) Anatomy postgraduate student and experienced anatomy demonstrator at Sefako Makgatho Health Sciences University. Her work focuses on gross anatomy, cadaveric dissection and practical instruction, with a strong interest in linking anatomical science to clinical relevance. Sandy has supported e-learning systems, delivered academic presentations, and contributed to research on thoracodorsal and subscapular artery morphology. She has earned recognition for her postgraduate research, including a second-place oral presentation award at SMU Research Days 2025. Passionate about teaching and academic development, she is committed to advancing anatomical education and surgical-anatomy research

Covenant Ngomana

Covenant Ngomana is a BPharm (Hons) graduate and MPharm Clinical Pharmacy candidate at Sefako Makgatho Health Sciences University. With experience across hospital, primary-care and community-pharmacy settings, he has developed skills in medicine management, dispensing, supply-chain processes and clinical-pharmacy service delivery. Covenant is actively involved in student leadership, including roles in the SMU Choir, IPECP programme and youth community organisations. His research focuses on clinical pharmacists' role in managing drug-therapy problems in surgical patients, which he has presented at national conferences. Passionate about rural development and patient-centred care, he aims to contribute to improved clinical-pharmacy practice and health-system performance

Onalerena Mabeba

Onalere Mabeba is a Master of Science (Medicine) student at Sefako Makgatho Health Sciences University, with a background in Anatomy, Life Sciences and Risk Management. She has experience in clinical, administrative and tutoring roles across health and academic settings, including BroadHealth Networx Medical Centre and the SMU Anatomy and Biology departments. Her research focuses on anatomical variability with relevance to surgical practice. Onalere is skilled in dissection, research methodology, data analysis and academic facilitation. She brings strong organisational and interpersonal skills and is committed to advancing her academic career while contributing to patient-centred healthcare and scientific education.

Lizelle Steenkamp

Lizelle Steenkamp is a data-science and healthcare-analytics leader at Discovery Health, where she heads the data science, clinical AI, oncology and quality portfolios. With a Master's in Statistics from the University of Pretoria, she has led the development of advanced analytical frameworks and clinical AI models used across the organisation. Lizelle has contributed to research published in local and international journals and is a multiple global award recipient, including being a two-time Starfield Award winner. Her expertise spans predictive modelling, clinical ontologies, healthcare quality measurement and AI-enabled analytics. She is passionate about leveraging data science to transform healthcare delivery and outcomes.

Charlé Steyl

Dr Charlé Steyl is a specialist anaesthesiologist in private practice in Pretoria and a part-time lecturer at Sefako Makgatho Health Sciences University. She also serves as a sessional consultant at Dr George Mukhari Academic Hospital, where she teaches registrars and supports major surgical services. Dr Steyl has extensive international experience through roles with International SOS in Azerbaijan and Madagascar. Academically, she has supervised MMed candidates and contributed to research on perioperative recovery, digital patient-engagement platforms and quality-of-recovery measures. She holds the FCA (SA), DA, DCH and an MMed in Anaesthesiology, and remains active in clinical care, research and postgraduate training.

Victoria Barr

Victoria Barr is a health economist specialising in health financing, payment reform and regulatory policy. Based in South Africa since 2016, she is currently seconded to the National Health Insurance (NHI) Branch at the National Department of Health, where she leads design work on provider-payment mechanisms for primary healthcare. Her consulting portfolio spans the World Bank, WHO, CHAI, National Treasury, Icon Oncology, Sizwe Medical Fund and the Embassy of the Netherlands. Previously, she served as Deputy Director of Pricing at Monitor (now NHS Improvement) in England, leading major NHS-financing reforms. She holds an MSc in Economics from the University of Manchester and has worked across public policy, competition and economic-development sectors.

Inge Kleinhans

Dr Inge Kleinhans is a Public Health Medicine Specialist and Lecturer in the Department of Anaesthesiology at Sefako Makgatho Health Sciences University. Her work spans health-systems governance, equity, leadership development, science diplomacy and surgical-systems strengthening. She held several leadership positions both internationally and in-country. Currently, she serves on several national committees, including the Scientific Committee of the SA Clinician Scientist Conference and the Executive Committee of the SA Safe Surgical Care Technical Working Group. Dr Kleinhans also leads Communications and Public Relations for Women in Global Health South Africa. She brings extensive experience in research, technical advisory and capacity-building, with a strong commitment to advancing equitable, gender-responsive and data-driven health systems.

Brenda Kubheka

Dr Brenda Kubheka-Chauke is a physician executive, entrepreneur and health-systems strategist with more than two decades of leadership across clinical governance, ethics and healthcare operations. She is co-founder of Health IQ Consulting and Matched Media, specialising in clinical-risk management, research ethics and health communication. Dr Kubheka-Chauke previously served as Chief Director for Hospital Services in Mpumalanga, Chief Medical Officer at Clinix Health Group, and Senior Operations Manager at Medscheme. She sits on several boards, including CANSA, the Research Ethics Association of South Africa and COHSASA committees. She holds an MBA, PDBA, an MSc in Bioethics from Harvard Medical School (2025), and multiple qualifications in ethics, leadership and media.

Elliot Motloung

Dr Elliot Motloung is a paediatric surgeon and the Head of Department of Paediatric Surgery, committed to expanding access to specialist surgery for children in rural and under-served provinces of South Africa. He established the first public paediatric surgical units in Limpopo and Mpumalanga, significantly improving equity in paediatric care. In addition to neonatal, general paediatric, trauma and onco-surgery, Dr Motloung specialises in minimally invasive paediatric procedures and is known for pioneering accessible, high-quality care in resource-constrained settings. His work reflects a strong commitment to rural health, surgical innovation and health-system strengthening across provinces.

Gary Kantor

Dr Gareth (Gary) Kantor trained and worked in Canada and the USA before returning to SA in 2005. He is an anaesthesiologist with diverse areas of interest, including quality improvement and patient safety, health data and electronic health record, patient-reported outcomes, health technology assessment, preoperative care, genomics and precision medicine. Gary is an Improvement Advisor and Faculty at the Institute for Healthcare Improvement (Boston, MA, USA), an honorary lecturer at UCT, and Assistant Professor at Case Western Reserve University (Cleveland, OH, USA) and consultant to Insight Health Solutions.

Hyla Kluyts

Prof Hyla Kluyts is an anaesthesiologist with expertise in critical care and perioperative medicine, and serves as Professor and Head of Anaesthesiology & Critical Care at Sefako Makgatho Health Sciences University and Dr George Mukhari Academic Hospital. As the first female full professor in Anaesthesiology in South Africa, she is committed to advancing academic excellence and promoting equitable access to safe, affordable perioperative care. Prof Kluyts founded Safe Surgery South Africa, which supports collaborative perioperative research and administers the African Perioperative Research Group (APORG). She has led major African surgical outcomes studies and holds an NRF C2 rating. Her research focuses on preoperative risk prediction, surgical outcomes and the use of data to drive perioperative quality improvement.