11th Annual Scientific Conference and
12th Annual General Meeting

21st - 23rd June 2017

THEME

Role of Orthopaedics in Achieving the UN Sustainable Development Goals

Pride Inn Paradise Beach Hotel, Shanzu, Mombasa
INTRAMEDULLARY NAILS
OSTEOSYNTHESIS PLATES
EXTERNAL FIXATOR

www.sofemed.com.tn
B.P.74 Soliman(2) 8027 Tunisia
Tél./Fax : +216 72 399 380/474
info@sofemed.com.tn
KENYA ORTHOPAEDIC ASSOCIATION

11TH ANNUAL SCIENTIFIC CONFERENCE

&

12TH ANNUAL GENERAL MEETING

2017
Distinguished guests, dear colleagues, ladies and gentlemen
The Kenya Orthopaedic Association wishes to welcome you all to the 11th annual scientific conference and annual general meeting in Mombasa. It is my hope that all of you will take back with you some fond memories of this beautiful city and environment and even more so, some nuggets of knowledge and skills that will enrich your individual orthopaedic practice and in the region at large and lead to better outcomes in our work.

This conference definitely offers a great chance to meet colleagues; the young and the old, those with a world of experience, the not so experienced and those contemplating taking the orthopaedic journey in life and practice. We all stand to gain a lot as we make new friends and learn from each other.

The gathering opens our eyes to the great diversity of the types of patients we encounter and the facilitation available in our various hospitals to deal with the same: from the very well-endowed to those with hardly anything to go by and yet all must strive for the best results possible. So let’s take the chance to teach and learn from each as to how best we can utilise the available resources to maximally restore the function of our patients, especially with regard to those who have not had time to consult the text books nor their bank manager before presenting to us!

Orthopaedic knowledge and practice are dynamic with certain aspects changing rapidly. Some of the changes are useful and should be quickly embraced as they make real and tangible differences in our outcomes. Care must however be taken to separate the truly new and useful from the new and “fashionable” that do not make any difference in the final results (but marketed otherwise), usually leaving the patient in greater want of cash.
It is prudent to walk a few paces behind some of the new practices and developments in orthopaedics until superior and affordable results are proven over time before embracing the new and often glittering. This is particularly important in the current situation where resources are meagre.

Those of us here who have attended many conferences locally and globally, must ask ourselves if the many sessions and presentations that we have attended have changed the way we practice orthopaedics at all or if we carry on with the attitude of “this is the way I have always done it and it works” and teach others the same! So as we spend time at this conference, May each one of us learn something new that will enrich the way we practice orthopaedics in our centres that will bring about sustainable, affordable and superior results for our patients.

Our raison d’être
Dear Participant,

The field of orthopaedics is an ever changing perfectly balanced mix of art and science. While the art will be improved by observation and practice, the science is the result of well performed studies and adequate reporting of these studies. This year, the scientific committee has assembled a collection of speakers and topics to provide a platform for the dissemination of the science of orthopaedics. We have also done our best to select complex cases that we can all use to improve the art of orthopaedics. The pre conference workshops with morning didactic sessions and practical demonstrations in the afternoons will enhance both aspects of orthopaedics.

As we share with colleagues, let us remember that industry both implant and pharmaceutical play a key role in the development of techniques, products and procedures. They are also a key resource to learn from.

I wish all of you happy deliberations and learning so that above all else we may be able to manage our patients better.

Long live the Kenya Orthopaedic Association
Prof. PLO Lumumba is the Director and Chief Executive Officer of the Kenya School of Law. He is a Professor of Public Law and Founding Dean, Kabarak University School of Law. He has lectured law at the University of Nairobi, the United States International University (Africa), Widener University USA (Nairobi Summer School). He is an Advocate of the High Courts of Kenya and Tanzania. He holds Bachelor of Laws and Master of Laws degrees from the University of Nairobi and a LL.D from the University of Ghent, Belgium. He is also a holder of the Degree of Doctor of Letters (Honoris Causa) from the University of Cape Coast in Ghana. He is a Certified Public Secretary CPS (K) and a Member of the Kenya Institute of Management (MKIM). He has been trained on Humans Rights at the Institute of Advanced Legal Studies University of London in England, Humanitarian Law at the Raoul Wallenberg Institute of the University of Lund in Sweden and on International Humanitarian Law in Geneva, Switzerland.

He is a renowned legal practitioner. He has written several books including: Criminal Procedure in Kenya, An outline of Judicial Review in Kenya, Kenya's long search for a Constitution: The Postponed Promise and Judicial Review and Administrative Law. He has published numerous articles in refereed journals and several book chapters. He has co-authored ‘The Constitution of Kenya 2010 An introductory commentary’ with Dr. Luis Franceschi. He has also co-authored several books on Ethics. His non-legal books include; Swearing by Kenya, A Call for Political Hygiene in Kenya Politics and From Raw Deal to Real Deal. He has also co-authored twenty seven (27) other Books on Integrity as School Series. He has recently ventured into fiction with his book ‘STOLEN MOMENTS’.

He is a former Secretary of the Constitution of Kenya Review Commission and former Director of the defunct Kenya Anti-Corruption Commission, (KACC). He is the Founding Trustee of the African Institute for Leaders and Leadership (AILL) and founding Chairman of the Association of the Citizens Against Corruption (ACAC).
He has been named and recognized by the International Commission of Jurists (Kenya Section) and the Law Society of Kenya for his exemplary contribution to the legal profession. He was recognized by the Kenya-USA Association for the Martin Luther King Jnr., Leadership Award in 1996 and was the recipient of the 2008 Martin Luther King Africa Salute to Greatness Award by the Martin Luther King Jr. Africa Foundation. He has also been included in the Marquis Who’s Who in the World and is the Distinguished Mwalimu Julius Nyerere Lecturer for 2014. He was the 11th Kwame Nkrumah Lecturer at the University of Cape Coast in Ghana in 2016.

MANJALE MEMORIAL ORATOR

Prof Lawrence Ndegwa Gakuu, EBS MBChB, MMed, FCS (ECSA)

Prof Gakuu is a practicing Orthopaedic Surgeon and Professor in the Department of Orthopaedic Surgery at the University of Nairobi. He completed his undergraduate medical degree from the University of Nairobi and later obtained a Master of Medicine in Surgery from the same university. He later specialised in orthopaedics by obtaining a Diploma in Orthopaedics and Accident Surgery from University of Birmingham in the UK and a Certificate in Traumatology from the University of Ulm in the then West Germany. He is a Fellow of the College of Surgeons East, Central and Southern Africa. He is registered as a Specialist Orthopaedic Surgeon by the Medical Practitioners and Dentists Board in Kenya and the General Medical Council (GMC) London, United Kingdom, He has over 50 publications in different regional and international peer reviewed journals and a vast teaching experience beginning from the year 1981. He has over five contributions to monographs and guidelines. He has served as an external examiner and supervised several exams. He is a member of 24 professional bodies and has served in different capacities as a member of different boards.
Dr Luke Ogonda

Dr. Luke Ogonda is a consultant orthopaedic surgeon at the Ulster and Musgrave Park Hospitals in Belfast, Northern Ireland in the United Kingdom. His subspecialist interests include limb reconstruction, complex lower limb trauma and lower limb arthroplasty. He also doubles up as a trainer on the Northern Ireland specialist training programme for trauma & orthopaedics and as an examiner at Queen’s university medical school.

His research interests include the impact of perioperative tranexamic acid on blood loss during surgery for proximal femoral fractures and the relationship between prophylactic antibiotic choice and surgical site infection in Northern Ireland trauma surgery. He has several publications in leading orthopaedic journals including the Bone and Joint Journal, the Knee, Journal of Arthroplasty, Journal of Bone and Joint Surgery (Br) and Journal of Paediatric Orthopaedics Br. He has also published the lead article in the American Journal of Bone and Joint Surgery (JBJS Am) which was the subject of the journal editorial. He has made several presentations at various national and international orthopaedic meetings. Nationally, he has presented to the British Orthopaedic Association, the British Hip Society, the British Association for Surgery of the Knee and the British Limb Reconstruction Society. Internationally he has presented to the European Federation of Orthopaedics and Traumatology (EFORT), the Australian Orthopaedic Association and by invitation, to the American Academy of Orthopaedic Surgeons.

Dr. Naseef Mohamed

Dr. Naseef is a professor of orthopaedics and arthroscopic surgery at the Cairo University Hospital in Egypt. He has developed into one of the foremost specialists in foot and ankle, knee and shoulder surgeries. He is currently a member of various international organisations including: International Society of Arthroscopy, Knee Surgery, and Orthopaedic Sports Medicine (ISAKOS) European Traumatology, Knee Surgery, and Arthroscopy (ESSKA) Society of Sports and Member of the European Foot and Ankle Society (EFAS) (1st non-European and
Dr. Andrew de Vlieg

Dr. Andrew de Vlieg is an orthopaedic surgeon with more than 20 years of experience in arthroscopic, reconstructive and arthroplasty surgery. After finishing his undergraduate degree at University of Witwatersrand in 1989 Dr. A. de Vlieg moved to Durban and completed his internship and orthopaedic specialization in the Durban academic hospitals. He commenced private practice in Umhlanga in 1997 and steadily moved his practice towards a knee exclusive basis. While doing this, he also completed a Postgraduate Diploma in Sports Medicine at the University of Natal. His practice was closely involved with the greater sports community in Durban and he was a founding member of Kings Park Sports Medicine Centre. During this time he worked closely with a number of professional sports teams in Durban including the Sharks (Rugby), the Dolphins (Cricket), Amazulu (Soccer), Lamontville Golden Arrows (Soccer) and Thanda Royal Zulu (Soccer). He is also a partner in Prime Human Performance Institute, a unique multidisciplinary sports centre based in Durban’s iconic Moses Mabhida Stadium. Dr. de Vlieg has an active involvement in teaching techniques of knee surgery both in South Africa and internationally and frequently presents at congresses. His practice is located in Gateway Private Hospital, opened in 2016 as a Specialist Hospital located in Umhlanga, just north of Durban.

Dr. Andres Combalia Aleu

Dr. Andres Combalia Aleu is a senior consultant orthopaedic surgeon and an associate professor at the University of Barcelona. He attained his bachelors and Masters degree from the University of Barcelona. He has an interest in joint replacements and spine surgery. He has managed over 20 research grants and has received more than 14 awards in the fields of research and orthopaedics.
Dr Sergi Sastre Solsona

Dr Sergi Solsona is an orthopaedic surgeon at the hospital clinic in Barcelona and the University of Barcelona. He possesses a degree in Medicine and Surgery from the University of Barcelona and a specialist degree in Orthopaedic Surgery and Traumatology at Hospital Clinic i Universitat de Barcelona in MIR program. He has also obtained a PhD in Medicine by the University of Barcelona with the Outstanding Cum Laude qualification for his study on the evaluation of cryopreservation of osteochondral fragments in condyles of rabbits by means of an environmental scanning electron microscope. He is the chief of the Knee and Arthroscopy Unit at Hospital Clínic of Barcelona. Other roles that he plays include leader of the Knee Fast-Track system at Hospital Clínic of Barcelona, Clinic Professor of the optional subject of Arthroscopic Surgery and the subset of Orthopaedics at the University of Barcelona, Co-director of the International Fellowship of Arthroscopy at the University of Barcelona, member of the Board of Directors of the Asociación Española de Arthroscopia and head of Awards / Web and Social Networks Section. He has more than 40 publications in International journals with high Impact Factors and has taught in more than 50 courses in Spain on arthroscopy.
Kenya Orthopaedic Association 2016-2018 Council
Honorary Chairman       Dr. Johnson Murila
Honorary Vice Chairman   Dr. James Kigera
Honorary Secretary       Dr. Peter Kilonzo
Honorary Treasurer       Dr. Akil Fazaal
Ex-Officio               Dr. Lectary Lelei
Editor- in-Chief, EAOJ   Prof. Lawrence Gakuu
Honorary Member          Dr. George Adari
Honorary Member          Dr. Bernard Odhiambo
Honorary Member          Dr. Samuel Ndanya
Honorary Member          Dr. Daniel Alushula
Honorary Member          Dr. Fred Sitati
Honorary Member          Dr. Richard Ombachi
Honorary Member          Dr. James Obandi
Honorary Member          Dr. Kepher Mak’Anyengo
Honorary Member          Dr. Soren Otieno
Honorary Member          Dr. Samson Bebora
Honorary Member          Dr. Fred Otsyeno

East African Arthroscopy Association 2017 Council
Honorary Chairman        Dr. Samuel Owinga
Honorary Vice Chairman    Dr. Mark Lutomia
Honorary Secretary        Dr. Benjamin Ndeleva
Honorary Treasurer        Dr. Ronald Kaale
Honorary Board Member     Dr. Samuel Nungu

Conference Committees KOA 2017
Conference Chair - Prof Lawrence Gakuu

Scientific Committee
Chairman               Dr James Kigera
Member                 Dr Fred Sitati

Finance and Fundraising Committee
Chairman               Dr Akil Fazaal
Member                 Dr Johnson Murila

Hospitality Committee
Chairman               Dr Jamleck Muthuuri
Member                 Dr Bernard Odhiambo

Event Organizer
Medics Management Services (MMS)
SPONSORS

PLATINUM SPONSOR
Orthomedics

Pre Conference Workshop
Orthomedics

Symposium
Pfeizer

Items in Kind
Conference Bags - Innocia Life Science
Posters, Program, Banners Lanyards and Name Tags - Lords Healthcare

Monthly CME Sponsors 2016/7
MOMBASA
2016 July - Novartis, August - MSD, September - Novartis, November - Pharmaken,
2017 February - Pharmaken, March - Novartis, April - GSK, May - Pharmaken,
June - MSD.

NAIROBI
2016 July - Pfizer, August - Novartis, September - Sai, October - Phillips Technologies,
November - Boeringer
2017 February - Vanmed, March - Novartis, April - Troika

EXHIBITORS
Sun Pharma
Boehringer Ingelheim
Galaxy
MSD
Amiken
Smith & Nephew
Macnaughton
Nebula
Alkem
Zawadi
Sanofi
Getz Pharma
Rosax
Troikaa
Harleys

Pitkar/Surgiwear
Pfizer
Vanmed
Sofemed
Remu Surgicals
Menarini
Johnson&Johnson
Double Medical
Sharma Orthopaedics
Karlstorz
Medtronic Kanghui
Chui Orthopedics
Asterisk
Lords Healthcare
Rosax Africa
### PRECONFERENCE WORKSHOPS

**Wednesday 21st June 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>0700 - 0800</td>
<td>Council Meeting</td>
</tr>
<tr>
<td>0800 - 1700</td>
<td>Total Knee Workshop</td>
</tr>
<tr>
<td>1700 - 1730</td>
<td>Tea Break</td>
</tr>
<tr>
<td>1730 - 1830</td>
<td>Sports</td>
</tr>
<tr>
<td>1830 - 1930</td>
<td>KOA AGM</td>
</tr>
<tr>
<td>1930 - 2100</td>
<td>Welcome Reception</td>
</tr>
</tbody>
</table>

### MAIN CONFERENCE

**Thursday 22nd June 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>0800 - 0815</td>
<td>KOA Chair</td>
</tr>
<tr>
<td>0815 - 0830</td>
<td>Scientific Chair</td>
</tr>
<tr>
<td>0830 - 0850</td>
<td>Session 1 Invited Lecture 1</td>
</tr>
<tr>
<td>0900 - 1030</td>
<td>Session 2 Parallel Session I</td>
</tr>
<tr>
<td>1030 - 1115</td>
<td>Tea Break</td>
</tr>
<tr>
<td>1115 - 1245</td>
<td>Session 3 Opening Ceremony</td>
</tr>
<tr>
<td>1245 - 1400</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>1400 - 1420</td>
<td>Session 4 Invited Lecture 2</td>
</tr>
<tr>
<td>1430 - 1600</td>
<td>Session 5 Parallel Session II</td>
</tr>
<tr>
<td>1600 - 1700</td>
<td>Session 6 Case Discussion I</td>
</tr>
<tr>
<td>1700 - 1730</td>
<td>Tea Break</td>
</tr>
<tr>
<td>1730 - 1830</td>
<td>Sports</td>
</tr>
<tr>
<td>1830 - 2100</td>
<td>Gala Dinner</td>
</tr>
</tbody>
</table>

**Friday 23rd June 2017**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>0830 - 0850</td>
<td>Session 7 Invited Lecture 3</td>
</tr>
<tr>
<td>0900 - 1030</td>
<td>Session 8 Parallel Session III</td>
</tr>
<tr>
<td>1030 - 1115</td>
<td>Tea Break</td>
</tr>
<tr>
<td>1115 - 1215</td>
<td>Session 9 Parallel Session IV</td>
</tr>
<tr>
<td>1215 - 1245</td>
<td>Session 10 Sponsored Session</td>
</tr>
<tr>
<td>1245 - 1400</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>1400 - 1420</td>
<td>Session 11 Invited Lecture 4</td>
</tr>
<tr>
<td>1430 - 1600</td>
<td>Session 12 Plenary Session</td>
</tr>
<tr>
<td>1600 - 1700</td>
<td>Session 13 Case Discussion II</td>
</tr>
<tr>
<td>1700 - 1730</td>
<td>Tea Break</td>
</tr>
<tr>
<td>1730 - 1830</td>
<td>Sports</td>
</tr>
<tr>
<td>1830 - 2100</td>
<td>Dinner</td>
</tr>
</tbody>
</table>
WEDNESDAY 21st JUNE 2017

KNEE WORKSHOP - LINK Total Knee Replacement Workshop
Venue – ARABUKO ROOM

Facilitators: 1. Dr. Sergi Sastre
2. Dr. Andres Combalia
3. Dr. Lectary Lelei
4. Prof. Josehat Mulimba

PART 1 - PRIMARY TKR

0830 - 0900  Registration of Participants.
0900 - 0910  Introduction of Waldemar LINK company.
0910 - 0925  Indications of TKR & Pre-operative Planning
0925 - 0940  Introduction of Gemini - Implant design and instruments
0940 - 1000  Surgical steps.
1000 - 1015  Q & A
1015 - 1045  Tea/ Coffee break
1045 - 1115  Video on operative procedure
1115 - 1125  Pitfalls & Pearls in TKR
1125 - 1145  Controversies in TKR, - Approaches, patella replacement, Cemented Vs Noncemented, Fixed Bearing Vs Rotating Platform, CR vs. PS
1145 – 1300  Saw Bone Session
1300 -  1400  Lunch

PART II - REVISION TKR

1400 - 1405  Is there need for Hinge revision knees in Kenya?
1410 - 1425  Indications for constrained knees & Types of constrained Knees.
1425 - 1435  Introduction on design and Philosophy of LINK Rotating hinge knee
1435 - 1445  Surgical Steps.
1445 - 1515  Video on operative procedure.
1515 - 1525  Pitfalls and Pearls in doing a rotating hinge knee.
1525 - 1535  Complication of Total Knee replacement.
Management of Infections after TKR.
Saw Bone Workshop.
Summary & discussions on availability of Link products in Kenya.

Sports - Water Polo

KOA
12th Annual General Meeting
Meeting called to order
Adoption of Agenda
Recording apologies
Confirmation of Minutes of Last AGM
Chairman’s Address
Secretary’s Report
Auditor’s Report
Treasurer’s Report and Budget
Strategic Plan Report
Constitution Amendments
Appointment of Auditor
AOB Which Adequate Notice has been given
THURSDAY 22nd JUNE 2017

Session 1  Invited Lecture 1  0830-0850
CHAIR: Dr Johnson Murila
Management of Bone Defects
Dr Luke Ogonda
Ulster and Musgrave Park Hospitals, Belfast, Northern Ireland, UK

Session 2  Break Away Parallel Session I  0900-1030
Each Speaker is Allocated 8 minutes for the Presentation. There will be 30 minutes at the end of all presentations for discussion.
Venue A (Arabuko Hall)
CHAIR: Dr James Mogire and Dr Edward Sang

A2/1  Tightrope for Syndesmosis Repair
Naseef MNA, Cairo University, Egypt

A2/2  Reconstruction of Chronic Patella Tendon Rupture
Oburu E, Murerwa M, Sang E, Miano M, Maru P, PCEA Kikuyu Hospital, Kenya

A2/3  Management of Lesser Toe Deformities
Naseef MNA, Cairo University, Egypt

A2/4  Use of Proximal Humerus Plate for Tibiotalocalcaneal Fusion
Oburu E, Murerwa M, Sang E, Miano M, Maru P, PCEA Kikuyu Hospital, Kenya

A2/5  Developing a Foot and Ankle Practice in Kenya
Oburu E, University of Nairobi, Kenya

Venue B (Dodori Hall)
CHAIR: Prof Lawrence Gakuu and Dr Levis Nguku

B2/1  THRA after ORIF for Acetabular Fracture
Chomba D, University of Nairobi, Kenya

B2/2  Experience with Conversion of Fused Hips to Total Hip Arthroplasty
Mulimba JAO, University of Nairobi, Kenya

B2/3  Obesity in Orthopaedics
Mulimba JAO, University of Nairobi, Kenya

B2/4  A Multidisciplinary Fast-Track Program for Patient Satisfaction: The Barcelona experience
Solsona SS, University of Barcelona, Spain
B2/5  Single Stage Revision for Infected TKR  
Vaishya R, Apollo Hospitals, New Delhi, India

B2/6  Knee Replacement in Obese Patients  
Combalia A, University of Barcelona, Spain

TEA BREAK

Session 3  Opening Ceremony  
Arabuko Hall  1115-1245

Master of Ceremonies – Dr Peter Kavoo Kilonzo

1100 - 1115  Entertainment by dancers
1115 - 1120  Introduction of New Orthopaedic Graduates - Dr Kilonzo, Hon Sec, KOA
1120 - 1130  Speech and Invite Guest of Honour - Dr. Johnson Murila, Hon. Chair, KOA
1130 - 1200  Guest of Honour/Official Opening - Prof PLO Lumumba
1200 - 1210  Presentation of Society Memorabilia - Dr Daniel Alushula
1210 - 1230  Dr. Majale Memorial Lecture – Prof Lawrence Gakuu
1230 - 1235  Vote of Thanks - Dr. James Obondi
1235 - 1245  Group Photo

LUNCH

Session 4  Invited Lecture 2  1400-1420

CHAIR: Dr Fred Otsyeno

PS, CCK or Rotating Hinge? Management of Constraint in Knee Revision Surgery

Dr Sergi Sastre Solsona, University of Barcelona, Spain

Session 5  Break Away Parallel Session II  1430-1600

Each Speaker is Allocated 8 minutes for the Presentation. There will be 30 minutes at the end of all presentations for discussion

Venue A (Arabuko Hall)

CHAIR: Dr Gichambira Gikenye and Dr Herbert Ong’ang’o

A5/1  Acetabular Morphometry and Shape of the Anterior Acetabular Ridge  
Gwala F, Awori K, Kigera JWM, Gikenye G, Ongeti K, University of Nairobi, Kenya

A5/2  Bilateral Differences in the Semitendinosus Tendon Graft for ACL Reconstruction  
Bundi B, Kigera JWM, Gikenye G, University of Nairobi, Kenya
A5/3  Anterior Curve of the Adult Femur and its Mismatch with Available IM Nails  
Aliyan FK, Munyali LK, Ndeleva BM, Lakati CK, Kenyatta University, Kenya

A5/4  Attachments of the Medial Meniscal Anterior Horn  
Ouko I, Pulei A, Ongeti K, Kigera JWM, University of Nairobi, Kenya

A5/5  Regional Differences in the Cellularity and Vascularity of the Patellar Tendon  
Wambua B, Awori K, Ongeti K, Kigera JWM, Olabu B, University of Nairobi, Kenya

A5/6  Differences in Measurement of Mechanical Axis  
Vaishya R, Vijay V, Birla V, Agarwal AK, Apollo Hospitals, New Delhi, India

Venue B (Dodori Hall)  
CHAIR: Dr Peter Kamau Njoroge and Dr Bernard Odhiambo

B5/1  Complex and Multiple Trauma  
Edapal JK, Lodwar Referral and Teaching Hospital, Kenya

B5/2  Improving Access to Quality Orthopaedic Care  
Kimengich Z, Kenyatta National Hospital, Kenya

B5/3  Managing Orthopaedic Implant Costs  
Wambu F, Nairobi Hospital, Kenya

B5/4  Subspecialization in the Field of Orthopaedic Surgery  
Muteti EN, Moi Teaching and Referral Hospital, Kenya

B5/5  Effect of Health Insurance on Inpatient Management of Trauma Patients  
Kaberia P, Karanja A, Nyotu R, Nyongesa, Kericho District Hospital, Kenya

Session 6  Case Discussions  1600-1700
Cases will be presented and discussed by experts in the field  
Venue A (Arabuko Hall)  
CHAIR: Prof John Ating'a and Dr Fred Sitati

Case 1 –
Case 2 –
Case 3 –

TEA BREAK
BEACH VOLLEYBALL
GALA DINNER
FRIDAY 23rd JUNE 2017

Session 7    Invited Lecture 3   0830-0850
CHAIR: Dr. Lectary Lelei
Dealing with Severe Instabilities in Primary and Revision Surgery
Dr Andres Combalia
University of Barcelona, Spain

Session 8    Break Away Parallel Session III   0900-1030
Each Speaker is Allocated 8 minutes for the Presentation. There will be 30 minutes at the end of all presentations for discussion
Venue A (Arabuko Hall)
CHAIR: Dr George Adari and Dr Samson Bebora

A8/1    ACL Repair with Internal Brace Augmentation
De Vleig, Umhlanga Medical Centre, Durban, South Africa
A8/2    Revision ACL Reconstruction
Mbugua FM, AIC Cure International Hospital, Kenya
A8/3    Multiligament Injuries of the Knee
De Vleig, Umhlanga Medical Centre, Durban, South Africa
A8/4    Medial Patello Femoral Reconstruction
Byakika TK, Upper Hill Medical Centre, Kenya
A8/5    Meniscal Repair Options
De Vleig, Umhlanga Medical Centre, Durban, South Africa

Venue B (Dodori Hall)
CHAIR: Dr George Museve and Dr Tom Mogire

B8/1    Osteogenesis Imperfecta
Kimani S, University of Nairobi, Kenya
B8/2    Destructive Bilateral Shoulder Arthropathy
Kamau DM, Gakuu LN, Sang EK, Menelik Medical Centre, Kenya
B8/3    Variant Anatomy of Median Arteries
Cheruiyot I, Bundi B, Ogeng’o J, Munguti J, University of Nairobi, Kenya
B8/4    Pregabalin Monotherapy for Chronic Low Back Pain
Pariyo BG, Fort Portal Regional Referral Hospital, Uganda

TEA BREAK
Session 9  Break Away Parallel Session IV  1115-1215
Each Speaker is Allocated 8 minutes for the Presentation. There will be 20 minutes at the end of all presentations for discussion
Venue A (Arabuko Hall)
CHAIR: Dr Samuel Owinga and Dr Paul Miano

A9/1  Arthroscopic Bankart Repair  
Mbogua FM, AIC Cure International Hospital, Kenya
A9/2  Rotator Cuff Repair  
Byakika TK, Upper Hill Medical Centre, Kenya
A9/3  Lartajet Procedure for Instability  
Byakika TK, Upper Hill Medical Centre, Kenya

Venue B (Dodori Hall)
CHAIR: Dr Soren Otieno and Dr Calisto Odongo

B9/1  Early Operative Management of Pilon Fractures Using the Anterolateral Approach  
Dave A, Oroko P, Aga Khan University Hospital, Kenya
B9/2  Functional Outcome of Operative Management of Humeral Shaft Fractures  
Munene P, University of Nairobi, Kenya
B9/3  Pin Tract Infection after Uniplanar External Fixation  
Rashid M, Ating’a J, Sitati F, University of Nairobi, Kenya
B9/4  Intimate Partner Violence Resulting In Bilateral Amputation of Forearms  
Omondi GPO, PCEA Kikuyu Hospital, Kenya.
B9/5  Post Operative Delirium in Spine Patients: The Lessons Learned  
Lawani O, Fort University College Hospital, Ibadan, Nigeria

Session 10  Sponsored Session - Pfeizer  1215-1245
CHAIR: Dr Richard Ombachi
Current Management of Osteoarthritis in Kenya
Prof JAO Mulimba
University of Nairobi

LUNCH
Session 11 Invited Lecture 4 1400-1420
CHAIR: Dr James Mogire
Management of Complex Periarticular Lower Limb Fractures
Dr Luke Ogonda
Ulster and Musgrave Park Hospitals, Belfast, Northern Ireland, UK

Session 12 Plenary Session - Finance and Orthopaedics 1430-1600
Each Speaker is Allocated 8 minutes for the Presentation. There will be 30 minutes at the end of all presentations for discussion
Venue (Arabuko Hall)
CHAIR: Dr Peter Kavoo Kilonzo and Dr Kepher Mak’Anyengo

A12/1 Professional Indemnity
Susan Maina, Britam Insurance

A12/2 Healthcare Financing
Martin Masara, Stanbik Bank

A12/3 Wealth Management
Ephraim Githinji, Britam Insurance

A12/4 Healthcare Investing in the Counties
Lee Karuri, Longonot Gate Holiday Resort City

A12/5 How To Be Tax Compliant,
Customer Care Team, Kenya Revenue Authority

Session 13 Case Discussions 1600-1700
Cases will be presented and discussed by experts in the field
Venue A (Arabuko Hall)
CHAIR: Prof LN Gakuu and Dr Samuel Ndanya

Case 1 –
Case 2 –
Case 3 –

TEA BREAK
SOCIAL EVENTS

Water Polo – Wednesday 21st June 2017
Hotel Animators

Welcome Reception - Wednesday 21st June 2017

Beach Voleyball - Thursday 22nd June 2017
Hotel Animators

Gala Dinner – Thursday 22nd June 2017

THEME:
CELEBRATING AFRICAN CULTURES

Master of Ceremony:
Dr Peter Kavoo Kilonzo

1830 -1900  Entertainment by dancers
1900 -1915  Welcome Address – Hon Chair, KOA
1915 - 1930  Invited Guest
1930 - 1945  Vote of Thanks
1945 - 2100  Dinner is served
2100  Dance

Tag of War - Friday 23rd June 2017
Hotel Animators
LIST OF ABSTRACTS

A2/1 Tightrope for Syndesmosis Repair
Naseef MNA, Cairo University, Egypt
Correspondence to: Dr. Naseef, 5 Rd 100, Horeya building, Horreya square, Cairo 11354, Egypt. Email: docnasef@hotmail.com

Injury to the syndesmotic ligaments, often referred to as a high ankle sprain, occurs in 1-18% of patients with an ankle sprain, with reports of injury in footballers of 3-6%. Ruptures of the syndesmosis are rarely isolated injuries, but generally occur in association with other osteoligamentous injuries, especially fractures of either the fibula or the posterior and medial malleoli. Syndesmotic injuries are associated with prolonged pain, disability and an unpredictable time away from sport. Athletes with associated syndesmotic injury take twice as long to RTP compared to isolated lateral ligament sprains. Treatment is based on the severity of the syndesmotic injury. Syndesmotic ruptures are commonly associated with ankle fractures. After reduction and fixation of the medial and/or lateral and/or posterior malleolus fractures and/or associated ligaments, intraoperative testing of the syndesmotic stability should be performed. The Hook or Cotton tests are regarded as the most reliable intra-operative stress tests. Traditionally, the treatment of syndesmotic ruptures involved the use of “positional screws” for temporary fixation of the injury allowing for ligament healing. More recently, suture button fixation devices are gaining more popularity. However, current literature is yet to support fully one method over the other as regards definitive evidenced based data.

A2/2 Reconstruction of Chronic Patella Tendon Rupture
Oburu E, Murerwa M, Sang E, Miano M, Maru P, PCEA Kikuyu Hospital, Kenya
Correspondence to: Dr. Ezekiel Oburu, P.O Box 30197-00100.
Email: oburue@gmail.com

Chronic Patella tendon insufficiency may result from a chronic rupture of the patella tendon, failed repair of the patella tendon or a non healed fracture of the inferior pole of the patella. Walking is very difficult if not impossible without an intact extensor mechanism. We present 5 Patients who underwent reconstruction of a chronic patella tendon using hamstring autograft. One was for a degenerate patella tendon, 3 were for a neglected patella tendon injury and one for inadequate fixation of inferior pole of the patella fracture. Follow up is complete in two patients with good range of motion for the knee. Currently one patient is still early in the post operative period and two are lost to follow up. The use of Hamstrings to reconstruct a chronic Patella tendon insufficiency is a viable and reasonable
option. The technique is not difficult and only requires harvesting hamstrings and leaving them at the insertion site. Patients will obtain reasonable function with regards to range of movement.

A2/3 Management of Lesser Toe Deformities
Naseef MNA, Cairo University, Egypt
Correspondence to: Dr. Naseef, 5 Rd 100, Horeya building, Horreya square, Cairo 11354, Egypt. Email: docnasef@hotmail.com

Deformities of the lesser toes are common and can be associated with significant morbidity. These deformities are often multiple and numerous treatment strategies have been described in the literature. The goal of surgical treatment is to improve symptoms by restoring alignment and function, and avoiding recurrence. In order to achieve this, it is essential for the treating surgeon to understand the normal anatomy and pathology of the various deformities. There is a paucity of prospective studies and randomized controlled trials assessing the efficacy of specific interventions. The rationale behind various treatment strategies is discussed and the results of published literature presented. Algorithms for the management of lesser toe deformities based on current literature are proposed.

A2/4 Use of Proximal Humerus Plate for Tibiotalocalcaneal Fusion
Oburu E, Murerwa M, Sang E, Miano M, Maru P, PCEA Kikuyu Hospital, Kenya
Correspondence to: Dr. Ezekiel Oburu, P.O Box 30197-00100.
Email: oburue@googlemail.com

Background: Tibial talocalcaneal (TTC) fusion can be achieved by the use of screws, a nail, a plate and external fixation. The challenge faced in the Kenya set up is the expense associated with nails and plates specifically designed for a tibiotalocalcaneal fusion. Furthermore while the nail may be available, the plates specifically designed for the procedure are not available locally. Results: We present a series of 5 TTC done by proximal humeral locking plate. One case was done in 2016 and the rest in 2017. The indications varied from trauma, Charcot foot, avascular necrosis of the talus, failed ankle fusion. Early post op results show the fixations have held in all the cases with fusion complete fusion in one case done 6 months as of time of reporting. Conclusion: TTC fusion is a 3.5 proximal humeral locking plate is a valid and reasonable option for a TTC fusion. This provides relatively simple and inexpensive options in patients who my need the procedure and expense is an issue.
Orthopaedic practice has evolved both locally in the international arena. Locally it has now move from being a sub specialty of general surgery to a bona fide specialty on its own. Internationally orthopedic surgeons are moving from general to subspecialty practice. This trend is slowly catching up in our set up. We present a single surgeons perspective about what it entails to develop foot and ankle practice in a mission hospital, teaching hospital and private setting. We will reviewed the common foot and ankle pathologies and the surgical solutions to these problems. Some unique 20 cases that have undergone surgery over the past 5 months are presented. The challenges and possible solutions to sub-specialty practice will be addressed.

We will present two cases of male patients in their 20s, involved in road traffic accidents. They sustained injuries to the acetabulum and underwent ORIF. On follow up both patients were noted to have AVN requiring THRA. We explore the risk factors that may be responsible for the adverse outcome in these patients.

Fusion of a hip occurs spontaneous as a result of disease process or is deliberately carried out to manage a painful and sometimes an unstable hip. In the past this was easily accepted as a final solution, but with improved technology and changes in life styles, this is not easily accepted any more especially among the young. In this communication are discussed indications, patient expectations, methods and complications encountered in six (6) 1 male and 5 female patients managed with conversion.
B2/3  Obesity in Orthopaedics
Mulimba JAO, University of Nairobi, Kenya
Correspondence to: Prof. Mulimba JAO, P.O Box 30197-00100. Email: josephatmulimba@yahoo.com

Obesity is a condition of excessive weight defined by World Health Organization (WHO) as a Body Mass Index (BMI) of 30 or more. It permeates all sphere of health including diabetes, cardiovascular diseases, pulmonary disease and orthopaedics. This poses challenges in situations of management. In orthopaedics weight bearing joints bear the brunt of the weight with osteoarthritis being commonest in the spine, hip and knee. The knee is the most affected. Efforts to shed weight before surgery are rarely met with success. Post operative complications are numerous. There is no conclusive evidence that weight loss immediately preoperatively reduces the rate of complications; although a number of studies have claimed that it does. The questions to be answered include how one reduces weight preoperatively and how post operative complications can be minimized. Obesity is becoming a problem in Kenya hence the need to look at the problem and suggest ways of dealing with it.

B2/5  Single Stage Revision for Infected TKR
Vaishya R, Apollo Hospitals, New Delhi, India
Correspondence to: Dr. Raju Vaishya. Email: raju.vaishya@gmail.com

Introduction: A two-stage revision of infected total knee arthroplasty has till now been the mainstay in the treatment protocol but recently single-stage revision of the prosthesis is gaining robust grounds. Methods: An extensive search of PUBMED, MEDLINE and COCHRANE DATABASE was done using defined keywords and the filters were added. The screening was done and exclusion and inclusion criteria were defined, identifying 13 studies with level 2 evidence. All included studies were extensively reviewed. Results: The outcome was tabulated in form of Excel sheet under headings such as total number cases in either group, total number of failures in each cluster, duration of antibiotic used in the post-operative period, variations in intra-operative procedure, amount of antibiotic used in the antibiotic loaded cement used during surgery, level of evidence of the different studies under review, early and late functional knee scores such as Oxford knee score, knee society score, Hospital for Special Surgery score, additional cost incurred during the two-stage procedure. Conclusion: Although the selection criteria are narrow for single-stage revision of infected total knee arthroplasty with robust data suggesting an inclination toward single staged procedure, nevertheless single-stage revision offers a lucrative cost-effective treatment option.
A5/1  Acetabular Morphometry and Shape of the Anterior Acetabular Ridge
Gwala F, Awori K, Kigera JWM, Gikenye G, Ongeti K, University of Nairobi, Kenya

Correspondence to: Dr. Kevin Ongeti, P.O Box 30197-00100.
Email: kongeti@yahoo.com

Background: Acetabular morphometry and its anterior ridge morphology are subject to extensive variability between populations and sexes. This morphometry is useful in prosthetic designs, preoperative planning of hip arthroplasty and determination of screw length. These data are however, scarce in the Kenyan population. **Methods:** 94 paired hip bones (44 female, 50 male) were examined from the osteology collection of the National Museums of Kenya. Shape of the anterior acetabular ridge was noted. Transverse, superoinferior and total diameter, depth, anterior and posterior wall and column thickness of the acetabulum were measured using Vernier calipers. **Results:** Shapes of the anterior acetabular ridge were curved (34.0%), straight (24.5%), angular (21.3%) and irregular (20.2%). The curved type was more frequent in females than males. The average total diameter was 4.90 cm, depth 2.37 cm, anterior wall thickness 2.35 cm, anterior column thickness 1.38 cm, posterior wall thickness 3.35 cm and posterior column thickness 2.30 cm, (p<0.05). There was no significant side differences (p>0.05). Male dimensions were significantly greater than female (p<0.05). Total diameter was most positively correlated with depth (r= .555) showing moderate strength of relationship (p<0.001). **Conclusion:** This study will help orthopaedic surgeons plan and execute hip surgeries and acetabular fracture fixation, recommending percutaneous fixation using screws of 6.5 mm and 3.5 mm width for posterior and anterior column respectively. Dimensional relationships and ridge morphology should be considered in hip arthroplasty and evaluating dysplastic hip.

A5/2  Bilateral Differences in the Semitendinosus Tendon Graft for ACL Reconstruction
Bundi B, Kigera JWM, Gikenye G, University of Nairobi, Kenya

Correspondence to: Mr. Brian Bundi, P.O.Box 30197-00100.
Email: nyamweya9083@gmail.com

Background: A solitary semitendinosus (ST) tendon graft is an option for anterior cruciate ligament reconstruction. Bilateral differences in ST tendon grafts, which may influence site of harvesting, have not been reported before as most published work on ST dimensions is obtained in a clinical setup where bilateral tendon harvesting is not done. We therefore sought to determine the existence of bilateral differences in ST tendon graft dimensions. **Methods:** Forty pairs of ST tendons were harvested from formalin fixed cadavers. The length of the tendons was
obtained using a tape measure after which they were folded into four-strand constructs whose diameter was obtained using sizing tunnels. Data analysis was done using SPSS version 21. **Results:** The average length and four strand construct diameter of the ST tendons was 29.80 ± 3.59 cm and 7.849 ± 0.658 mm respectively. The left ST tendons measured 29.950 (± 3.489) mm and the right ST tendons measured 29.800 (± 3.590) cm, p value 0.02. A similar trend was observed in the percentage of tendons that were adequate with 29/40 (72.5%) of the left and 25/40 (62.5%) of the right tendons being adequate. The four-strand constructs measured 7.865 (± 0.619) and 7.833 (± 0.598) mm on the left and right respectively, p-value 0.869. The percentage of tendons with adequate four-strand constructs did not show a significant difference, 23/40 (57.5%) and 22/40 (55.0%). **Conclusion:** We report the presence of bilateral differences in the ST tendon graft length. This may influence the site of graft harvesting. Further studies should be conducted to reinforce this observation.

**A5/3 Anterior Curve of the Adult Femur and its Mismatch with Available IM Nails**

Aliyan FK, Munyali LK, Ndeleva BM, Lakati CK, Kenyatta University, Kenya

**Correspondence to:** Ms. Fatma Aliyan, P.O Box 3630-80100 Mombasa.

Email: fkaliyan@gmail.com

**Background:** There are currently no studies which have documented the anterior femoral curvature in Kenya or elsewhere in Africa, and compared it to the curvature of the available intramedullary nails. **Objective:** To determine the anterior femoral curvature in cadaveric femora and to compare this with the curvatures of locally available femoral intramedullary nails. **Methods:** We determined the radii of 66 cadaveric femora by the method described by Karakas and Harma. The radii of locally available femoral intramedullary nails were also obtained from the respective product monographs. **Results:** We found that the radius of the curvature ranged from 52.02cm to 165.82cm with a mean of 96.4cm and standard deviation of 25.61cm. The radii of locally available intra-medullary nails ranged from 127cm to 200cm. **Conclusion:** The radius of curvature of the adult femora in Kenyans is less than that of other populations. There was a large mismatch between the available intramedullary nails and the femoral curvature. Further study of the complications resulting from this mismatch and a review of the design of the nails for local use is recommended.
Attachments of the Medial Meniscal Anterior Horn

Ouko I, Pulei A, Ongeti K, Kigera JWM, University of Nairobi, Kenya

Correspondence to: Mr. Innocent Ouko, P.O.Box 30197-00100 Nairobi, Kenya. Email: innoholmes@gmail.com

Variant anatomical meniscal attachments have previously been assumed as meniscal tears. Such assumptions may be higher in regions that experience high rates of meniscal tears. High rates of meniscal tears have been reported within the Kenyan population. However, meniscal tear detection using diagnostic radiological tools has often proven difficult. This may be attributable to the variant meniscal morphology, such as the variable attachments of the medial meniscal anterior horn. Within the Kenyan population, the variant bony and ligamentous attachments of the medial meniscal anterior horn is yet to be determined. This study, therefore, aims to determine the variant bony and ligamentous attachments of the medial meniscal anterior horn in a sample Kenyan population. The study was conducted within the Department of Human Anatomy, University of Nairobi. Sixty-two (62) menisci (31 knees) obtained from cadaveric specimen were used. The bony and ligamentous attachments were identified, recorded and photomacrographs taken. The variable bony attachments accounted for 54.8% of the medial meniscal anterior horns, contrary to the classical anatomical attachment. The anterior intermeniscal ligament was present in 62.3% while 16.2% showed attachment to the anterior crucial ligament. Knowledge of these variant attachments may provide the necessary adjunct to the diagnostic management of meniscal tears.

Regional Differences in the Cellularity and Vascularity of the Patellar Tendon

Wambua B, Awori K, Ongeti K, Kigera JWM, Olabu B, University of Nairobi, Kenya

Correspondence to: Mr. Brian Wambua, P.O Box 30197-00100. Email: michaelwambua327@gmail.com

Introduction: Patellar tendinopathy is an overuse injury due to repetitive and complex trauma on the patellar tendon. Its vascularity and cellularity influence its ability to repair microtears. These microtears occur in posterior-proximal third. Methods: One hundred and two pairs of patellar tendons were obtained from postmortem specimens. Sections from proximal, middle and distal third from anterior and posterior lamina of 20 pairs of patellar tendon were processed for microscopy to demonstrate cellularity and vascularity of tendon. Results: Vascularity was highest in the middle third of anterior lamina. Posterior lamina of the tendon was less vascular than the anterior lamina. Posterior lamina was more
cellular than the anterior with the proximal third showing highest number of nuclei. Findings indicate that pre-patellar genicular anastomosis contributes significantly to vascularity of the anterior lamina while anastomosis located in Hoffa’s fat pad may be less rich and resulting in lower vascularity for posterior lamina. Lower vascularity implies less healing ability after microtears. **Conclusion:** Orthopaedic surgeons should be aware of precarious pattern of vascularity to posterior lamina. Posterior lamina’s high cellularity especially in proximal third indicates that it may experience greater stress and via durotaxis more fibroblasts migrate to that region to produce more collagen fibers for resilience. Greater tensile stress experienced by posterior-proximal third and its lower vascularity may explain why it is susceptible to microtears.

**A5/6 Differences in Measurement of Mechanical Axis**

**Vaishya R, Vijay V, Birla V, Agarwal AK, Apollo Hospitals, New Delhi, India**  
**Correspondence to:** Dr. Raju Vaishya. Email: raju.vaishya@gmail.com

**Introduction:** Hip-Knee-Ankle [HKA] radiographs are commonly used in the surgical planning of Total Knee Arthroplasty (TKA). Any variation or error in the evaluation of HKA may reflect the outcome of management. With the advent of Picture Archiving and Communication Systems [PACS] the measurement is done with the help of computers, thus avoiding the need for bulky hard copies. The aim of present study was to assess the inter-observer variability in measurement of HKA axis using the PACS and try to check its correlation with the experience of the staff measuring this axis. **Methods:** 70 Standard full weight bearing HKA radiographs in standing position were studied by five doctors with a different range of experience in orthopaedics. **Results:** It was found that the two senior consultants had agreeability among them \( p=0.456, \) not significant, about the measurement of MFT angle. Similarly, the surgeons who were less than five years of experience in the branch also had an agreement amongst themselves \( p>0.00 \)). The statistically different readings were found to be between the senior consultant and the post graduate trainee \( p=0.001 \). Similar statistical significance difference was found to be between the senior consultant and the clinical fellow \( p=0.002 \). The other senior consultant also had statistically significant difference with observers of less than five years of experience \( p<0.005 \). **Conclusion:** The inter-observer variability is an issue and can be attributed to the difference in identification of the centres of the hip, knee and ankle. These differences keep on decreasing as the experience of the observer increases.
**B5/1 Complex and Multiple Trauma**

**Edapal JK**, Lodwar Referral and Teaching Hospital, Kenya  
**Correspondence to:** Mr. Julius Akal Edapal. Email: juliusakal@gmail.com

Multiple trauma is a complex entity that can be life-threatening. It is essential to understand the links between injuries and intervene as quickly as possible to provide the cells with a constant and appropriate supply of oxygen in order to prevent irreversible damage. Almost twenty years ago, statistics showed that deaths due to trauma followed a Trimodal Distribution over time. Half of these deaths were delayed by at least one to two hours after the initiating insult. This interval can be exploited, especially in Specialized Trauma Centres (where the most severely injured patients are cared for), to aggressively treat these patients, thereby reducing morbidity and mortality. In most countries, especially in the African continent, this hierarchy of Trauma Care Centres is non-existent; patients are distributed within the healthcare system randomly, depending on the localization of the accident. Because this limits the number of cases any one centre treats, this type of arrangement acts to inhibit the acquisition of competency in the handling of these complex patients. The relative lack of experience of individual emergency departments leads to difficulties in establishing diagnostic and treatment priorities for the most severely injured trauma victims. The approach to these patients must follow very precise guidelines, established scientifically in order to minimize the impact of the injury on life and maximize chances of satisfactory functional recovery.

---

**B5/2 Improving Access to Quality Orthopaedic Care**

**Kimengich Z**, Kenyatta National Hospital, Kenya  
**Correspondence to:** Mr. Zachariah Kimengich, P.O Box 20723-00200, Nairobi, Kenya. Email: zkimengich@yahoo.com

**Introduction:** Musculoskeletal injuries account for 14% of the world’s morbidity and mortality (WHO, 2004). According to the World Health Organization, road traffic crashes, a common cause of musculoskeletal injury, were ranked the ninth leading cause of death and disability in the world (WHO Factsheet, 2008). The global burden of injury is severely underappreciated and disproportionately affects low income countries. With timely, appropriate orthopaedic treatment disability and mortality can be prevented, yet appropriate health resources are seldom available. **Methods:** The design used in the study is a meta-analysis of secondary literature from various research studies, grey literature and peer reviewed sources of information on the topic of Improving Access to Quality Orthopaedic Care. **Results:** Affordability of medical devices such that patients and hospitals are able to purchase them when needed, as well as the physical availability of the devices
when providing orthopaedic care (Obrist et al, 2007). According to a research done in Uganda, training of more orthopaedic specialists and creating incentives for them to work in underserviced areas, such as rural and in the public health system. Creating policies for prioritization of trauma and orthopaedic services within health care. The adoption of innovative strategies for raising funds for orthopaedics care. **Conclusion:** Untreated orthopaedic injuries can result in permanent disability and mortality and thus have a significant impact on human and economic development. This therefore calls for critical attention on prevention and management of these injuries.

**B5/3 Managing Orthopaedic Implant Costs**  
**Wambu F,** Nairobi Hospital, Kenya  
**Correspondence to:** Mr. Fredrick Wambu. Email: fredrickwambu@nbihosp.org

The landscape of health care delivery in Kenya has tremendously evolved over the years. This is due to the various factors like enactment of the new constitution 2010 which brought about the devolution and also the medical equipment project by the government in the county hospitals. Costs of orthopaedic implants has tremendously increased and this has not been in tandem with the economic alignment, increased skills levels, distribution of expert in arthroplasty and also the expanded accessibility of health care for a majority of the Kenyan populations. This paper outlines the strategies to manage implant costs, roles of key stakeholders, and building a quality case while maintaining implant cost control.

**B5/4 Subspecialization in the Field of Orthopaedic Surgery**  
**Muteti EN,** Moi Teaching and Referral Hospital, Kenya  
**Correspondence to:** Dr. Elijah Muteti, P.O Box 1998-30100, Eldoret, Kenya. Email: enmuteti@gmail.com

**Background:** Subspecialization within the various specialties of medicine is on the rise in the world. The orthopaedic community is experiencing the same with academic centres tending to develop subspecialty practices in the developing world. **Objectives:** This article reviews literature on the history of subspecialization in medicine, the current status of subspecialization in orthopaedics, the perceived benefits and challenges of this process; and suggests a rationale for the application of orthopaedic subspecialization in the developing world. **Data source:** A PubMed search with the mesh term “subspecialization.” **Data selection/extraction:** Using the PubMed search engine, 452 abstracts were found discussing subspecialization. Twenty two relevant articles were found, studied and used in this review. **Results:** Subspecialization involves physician focus on a certain area of practice. This leads
to better results, progress in the area of choice, higher surgical case rates, and fewer complications; and to some extent, lower healthcare costs. However, it causes artificial shortages of surgeons, decreased generalist entry to the field, fragmentation of the specialty field with loss of unity, less trainee experience for residents and does not necessarily translate to a higher income. **Conclusion:** The developing world faces an enormous shortage of orthopaedic surgeons. A balance is needed in order to provide an orthopaedic surgeon who can take care of most orthopaedic problems; while also providing a subspecialist orthopaedic surgeons in subspecialty centres and academic centres to manage complex and rare conditions. A middle ground would be an orthopaedic surgeon with a subspecialty area, who practices general orthopaedics in addition to the subspecialty area of interest to manage orthopaedic problems in most hospitals in the developing world.

**B5/5 Effect of Health Insurance on Inpatient Management of Trauma Patients**

Kaberia P, Karanja A, Nyotu R, Nyongesa, Kericho District Hospital, Kenya

**Correspondence to:** Dr. Patrick Kaberia, P.O Box 11, Kericho 20200, Kenya. Email: patrickaberia@gmail.com

**Introduction:** Road traffic injuries (RTIs) account for majority of casualties and fatalities in Kenyan hospitals. The estimated cost as a percentage of the Gross National Product (GNP) in Kenya is almost 5%. Currently, only 20% of Kenyans have access to some sort of medical insurance coverage. This study looks at health insurance as a step towards averting catastrophic health expenditure associated with out-of-pocket (OOP) payments among motorcycle Users (MCU).

**Methods:** A 12 month long retrospective study of patients admitted with injuries secondary to motorcycle accidents was done in Kericho District Hospital (KDH). Data was collected from hospital records, a questionnaire administered through structured interviews. NHIF sensitization meetings were also conducted and data collected. **Results:** Of 265 MCUs injured, Majority were male(98%), aged 20 – 35 years (86%), with 2 -4 dependants (78%). 26% of patients had health insurance. 80% of cases involved fractures, majority (68%) femur shaft fractures. 80% of the latter were admitted for 10 – 14 weeks and cost of care ranged between Ksh. 90,000 -110,000. In the NHIF group the overall cost of care was 72% lower than the sample average with a reduction in duration of stay by 6 – 8 weeks. **Conclusion:** Majority of inpatient motorcycle related injuries in KDH were among young, productive, male riders. High proportions of injuries were femur shaft fractures and OOP financing resulted in long durations of hospital stay and high cost of care. Insurance schemes like NHIF offer a solution to financial hardships associated with OOP payments.
A8/1  ACL Repair with Internal Brace Augmentation  
De Vleig, Umhlanga Medical Centre, Durban, South Africa  
**Correspondence to:** Dr. Andrew De Vleig. Email: adv@iafrica.com

This presentation will look at the rationale for relooking at Primary ACL repair as a technique and how we can improve on results that have previously been published. The reasons for repair failure are explored and suggestions and techniques to overcome these are discussed. The technique, rationale and safety of the use of an internal brace as part of the repair construct are examined. The indications for attempting primary repair are provided and the technique is demonstrated with a video presentation. Some examples of case studies are presented and discussed. This is a challenging surgical technique and its place in the treatment algorithm is somewhat controversial, but in certain select cases this may provide the best possible result following the devastating injury of ACL rupture.

A8/2  Revision ACL Reconstruction  
Mbugua FM, AIC Cure International Hospital, Kenya  
**Correspondence to:** Dr. Francis Mbugua, P.O Box 59-00220 Kijabe. Email: fmbugua@gmail.com

**Introduction:** The anterior cruciate ligament (ACL) is an important stabilizing ligament of the knee that is frequently injured by athletes and trauma victims. It is the most common injured ligament of the knee in both contact and non-contact situations. Kenya is a sporting nation and sports injuries are increasingly becoming a big part of the orthopaedic care that we are facing. Younger patients, high level athletes and highly active patients will have ACL reconstruction as the treatment option. Recurrent ACL rupture is a big concern for patients after an ACL reconstruction. **Methods:** We performed a retrospective review of patients who underwent a revision ACL reconstruction over a 4-year period. Variables we looked at were the mechanism of re-injury, initial graft choice, revision graft choice, rehabilitation period and return to previous level of activity. **Results:** Total ACL surgeries performed were 123 and 13 ACLs were revision surgeries constituting 10.6% of cases done in that period. Meniscus tears were in 23%, Chondral injuries in 38.5%. 30.7% of the patients had a clear mechanism of re-injury, while 69.2% had no clear re-injury pattern. Tunnel malposition was present in 85% of the patients. BTB for revision was used in 38.5%, ipsilateral hamstring tendon in 46%, and contralateral hamstring in 15%. 85% of the patients returned to pre-injury level of activity. **Conclusion:** ACL surgeries have been shown good outcomes for majority of cases. Tunnel malposition remains the commonest cause of revision surgeries. It is possible even in our resource limited setting to successfully perform revision surgeries with the correct planning and decision making.
This presentation will deal with the recognition of multiple ligament injuries of the knee, the often severe accompanying pathologies and the approach to management. There are many areas of significant controversy in dealing with these injuries and I will examine what the current literature suggests the best approach to be. Some of these issues include:

- surgical vs. non-surgical management
- timing of surgery; delayed vs. acute
- repair vs. reconstruction
- graft selection issues
- rehabilitation

Through examining these different aspects an approach to the best management practice can be derived.

The medial patello femoral ligament (MPFL) is the primary soft tissue restraint to lateral patella displacement in early flexion. The role of an MPFL reconstruction is to restore the loss of the medial patella soft tissue stabiliser that has been torn. MPFL tearing is a consequence of patella dislocation and not a cause of instability. There may also be associated risk factors such as trochlear dysplasia and or patella Alta when in fact MPFL reconstruction becomes even more significant. At the moment current literature doesn’t provide clear indications as to when risk factors need to be corrected in addition to MPFL reconstruction. In our practice we tend to perform MPFL reconstructions for patients with recurrent patella dislocations. There are many techniques that have been described for MPFL reconstruction that aim to recreate the absent ligamentous tissue between the proximal medial aspect of the patella and the attachment site of the femur. In this overview we describe a technique using the gracilis tendon, 2 suture anchors with a bio interference screw or tight rope endobutton. We also emphasise on the pearls of the surgery that enable a successful outcome and a brief outline of the post operative rehabilitation.

Two paediatric patients under 10yrs reported to have sustained injuries to the upper limb and the lower limb in the neonatal period with no history of...
antecedent trauma. No treatment was accorded and after repeated hospital visits these children were found to be normal. Later in life at the age of 18 months both were noted to have progressive upper limb and lower limb deformities, abnormal dentinogenesis and brownish discoloration of their sclera. No significant family history of congenital anomalies. They were later diagnosed with osteogenesis imperfecta and have since been on follow up at the P.C.E.A kikuyu mission hospital where they have had several orthopaedic procedures to correct the deformities. Great progress has since been made as the two are ambulant. Discussion: Osteogenesis imperfecta is a disease of mesodermal tissues with abnormal or deficient collagen shown in bone, skin, sclera, and dentin. Local data: in a study conducted at the A.I.C CURE Kijabe hospital of the 80 patients seen 57.5% were males and 42.5% being females. The eldest patient was 30 years old while the youngest was 3 years. In the above two cases, diagnosis of the disease was delayed almost at the age of 2 years, the guardians had faced several challenges prior to diagnosis including being accused of child abuse and neglect. How effective is our routine newborn examination? Could this have been detected at birth and in the neonatal period?

B8/2  Destructive Bilateral Shoulder Arthropathy
Kamau DM, Gakuu LN, Sang EK, Menelik Medical Centre, Kenya
Correspondence to: Dr. David Kamau, P.O Box 55164 - 00200, Nairobi, Kenya. Email: drkamaudm@gmail.com

Destructive bone and joint lesions are commonly seen in aggressive tumors which can be benign aggressive tumors, malignant tumors or metastatic lesions. There are also seen in infections commonly osteomyelitis. Less commonly joint destructions can be seen following tabetic arthropathy seen in tertiary syphilis or diabetic arthropathy. An 80 year old diabetic patient has been on follow up at our facility for 14 years with bilateral joint pains, with initial normal radiological findings of the shoulder. Patient has limited range of movement in both shoulder joints. Current radiographs show absent bilateral humeral heads. VDRL and TPHA tests done were positive. Patient was treated for syphilis and is due for bilateral shoulder arthroplasty.

B8/3  Variant Anatomy of Median Arteries
Cheruiyot I, Bundi B, Ogeng’o J, Munguti J, University of Nairobi, Kenya
Correspondence to: Mr. Isaac Cheruiyot, P.O Box 30197–00100, Nairobi, Kenya. Email: isaacbmn@outlook.com

Background: Knowledge of variant anatomy of median arteries may be important
in the diagnosis and management of median nerve entrapment neuropathies as well as in the mid-forearm approach to median nerve block. These variations however remain undetermined within our population. **Objective:** To describe the variant anatomy of median arteries in a select Kenyan population. **Methods:** Sixty-two upper limbs from thirty one formalin-fixed cadavers from the Department of Human Anatomy, University of Nairobi were used. Prevalence, types, origin of the median arteries and incidences of median arteries piercing median nerves were determined. **Results:** Median arteries were observed in 37 (59.7%) cases (palmar type: 12 (32.4%); antebrachial type 25 (67.6%)). The palmar type formed the superficial palmar arterial arch in all cases. The median arteries originated from the common interosseous artery in 21 (56.8%) cases, anterior interosseous artery in 13 (35.1%) cases and ulnar artery in 3 (8.1%) cases and pierced the median nerve in 7 (18.9%) cases. **Conclusion:** The current study reports a higher prevalence in the palmar type of median arteries than previously described. Further, there are higher incidences of median arteries piercing median nerves. This should be taken into consideration in the diagnosis and management of entrapment neuropathies involving the median nerve.

**B8/4 Pregabalin Monotherapy for Chronic Low Back Pain**

**Pariyo BG,** Fort Portal Regional Referral Hospital, Uganda

**Correspondence to:** Dr. Pariyo Bonane Godfrey.

Email: pariyobonane@yahoo.com

**Introduction:** Chronic low back pain associated with radiculopathy is a common reason for physician visits but no guidelines are available for management of these patients in Uganda. Studies in Germany using Pregabalin monotherapy have either shown no or inferior effect to combination therapy in USA on resolution of symptoms (Baron R et al 2010, Luca C et al 2009). We evaluated clinical response to Pregabalin monotherapy on low back pain associated with radiculopathy at the Orthopaedics clinic of Fort Portal Regional Referral Hospital in Western Uganda.

**Methods:** In this prospective study conducted from February to July 2015, 15 patients with chronic low back pain associated with radiculopathy exceeding 3 months were seen in the orthopaedic outpatient clinic at Fort Portal Regional Referral and all were treated with a 4-week course of oral Pregabalin (75mg taken once a day) and evaluated for clinical improvement. Visual Analogue Scale (VAS) for pain was used to assess the degree of pain among patients after 4 weeks of treatment. Structured questionnaires were used to capture sociodemographic and clinical data. **Results:** Of the 15 patients 10 were females and 5 were males, with age range of 28 -75 years and mean age 53 years. Three patients were unable to walk before treatment due to pain. Before treatment with Pregabalin all the
patients had Visual Analogue score of 8-10. After 4 weeks of treatment with oral Pregabalin 13 patients showed significant improvement with reduction in the Visual Analogue score to 0-2 while 2 patients had modest reduction in Visual Analogue score of 6-8. **Conclusion:** Oral Pregabalin has good effect on the treatment of patients with low back pain associated with rediculopathy. However further research is needed with sufficient sample, randomization and longer follow up.

**A9/1  Arthroscopic Bankart Repair**

Mbogua FM, AIC Cure International Hospital, Kenya  
**Correspondence to:** Dr. Francis Mbogua, P.O Box 59-00220 Kijabe.  
Email: fmbogua@gmail.com

**Introduction:** Shoulder dislocations account for 50 percent of all major joint dislocations. Anterior dislocation is most common, accounting for 95 to 97 percent of cases. The shoulder joint is anatomically inherently unstable therefore explaining the high rate of dislocation in comparison to other joints. The commonest lesion identified in patients with an anterior dislocation is an anteroinferior labral tear/defect and a hillsach's lesion for recurrent dislocation. Surgical treatment of recurrent dislocations involves repair of this labral defect with either open or arthroscopic methods. **Method:** We performed a retrospective review of arthroscopic Bankart reconstruction performed at our institution over a 3-year period (Jan 2014 – March 2017). Main objective was to evaluate the patterns of reconstruction, conversion rate to open procedure, return to pre-injury level of activity and to access complications as a result of the procedure. **Outcomes:** We performed 62 shoulder arthroscopies during that period. Arthroscopic bankart reconstructions were performed in 29% of those patients (18). Bony Bankart lesions were in 22% and none required bony procedure. 100% of patients underwent a soft tissue labral repair. There were no redislocation cases but 10.5% had subluxatory episodes that did not require repeat surgery. Grinding in the shoulder is the commonest complaint at 55.5%, followed by loss of external rotation at 44.4%. 10.5% had to be converted to an open procedure. 89% of the patients returned to pre-injury level of activity. **Conclusion:** Arthroscopic Bankart reconstruction can be successfully performed in our resource limited setting with good results.
A9/2  Rotator Cuff Repair

Byakika TK, Upper Hill Medical Centre, Kenya

Correspondence to: Dr. Timothy K Byakika. Email: timothy.kagoda@gmail.com

Rotator cuff tears are common debilitating conditions of the adult shoulder that are usually treated by repair. The rotator cuff is a muscle that stabilises the shoulder and also abducts the arm. After the age of 50 there is degeneration of the cuff and this may lead to tears. These may be precipitated by trivial trauma or none at all. The patients complain of pain in the deltoid region of the upper arm that is associated with weakness in lifting of the arm. The goals of Rotator cuff repair (RCR) are to remove pain, restore the anatomy of the affected shoulder and improve on its strength and range of motion. Surgery for RCR has been in use since 1911 and evolved from open RCR to the arthroscopically assisted (mini open) RCR and more recently to an all arthroscopically RCR. Whereas open RCR repair achieves reasonably good outcomes most studies suggest that arthroscopic RCR has better outcomes than open RCR in terms of less postoperative pain, earlier return of strength, range of motion, quicker rehabilitation and also lower retear rate. In Kenya there is a paucity of data on rotator cuff tears. This presentation is aimed at increasing awareness on the subject of rotator cuff tears and also describe an arthroscopic double row repair technique.

A9/3  Lartajet Procedure for Instability

Byakika TK, Upper Hill Medical Centre, Kenya

Correspondence to: Dr. Timothy K Byakika. Email: timothy.kagoda@gmail.com

The latarjet procedure is a surgical technique that is use to treat recurrent shoulder dislocations typically caused by a 20% glenoid bone loss or more. It was first described in 1954 by Dr Michael Latarjet a French surgeon. The mechanism of action has been described as a triple blocking effect.

1) the conjoint tendon acting as a sling on the subscapularis and capsule with the arm abducted and externally rotated
2) increasing or restoring the glenoid bone
3) Repair of the capsule to the stump of the coraco acromial ligament.

The procedure involves a transfer of the coracoid bone and the fixation of the coracoid to the glenoid with 2 screws. This can be done via an open or arthroscopic technique. The open latarjet procedure can be difficult to perform and has a fairly steep learning curve. However it is the appropriate procedure in instability patients with significant glenoid bone loss. It is documented that with appropriate patient selection it can prevent recurrent dislocation in approximately 94-99% of patients. In this overview we describe the indications for latarjet surgery and the way an open procedure is performed.
Early Operative Management of Pilon Fractures Using the Anterolateral Approach

Dave A, Oroko P, Aga Khan University Hospital, Kenya
Correspondence to: Dr. Ankit Dave, P.O Box 39141, 00623 Nairobi.
Email: ankitdave26@hotmail.com

Background: Pilon fractures are a management challenge due to complexity of fracture pattern and complications. The soft tissue state and its subsequent handling is crucial in its outcome. The approach overlying the subcutaneous border of the tibia has wound healing complications. The anterolateral approach has become popular as it offers improved soft tissue coverage leading to fewer wound complications but it is dictated by the fracture pattern and the anterolateral plate use. Additional exposures may be required to address other areas, such as the medial malleolus which cannot be accessed through this approach. Methods: Review of patients who underwent antero-lateral plating for pilon fractures. A standard antero-lateral approach was done to plate the distal tibia in all patients; a separate medial incision to plate the medial malleoli was used depending on the fracture pattern and a lateral incision to plate the fibula in all cases. Results: 6 patients were assessed retrospectively following antero-lateral plating. 5 patients were operated within 24 hours and 1 operated after 10 days due to athletes’ foot. Out of the 6 patients 2 were put on external fixator for reduction purpose away from the plating site. All had good results radiologically and clinically. There were no wound healing problems. Conclusion: Early operative management of pilon fractures using an anterolateral approach provides excellent exposure for accurate fracture reduction and no wound complications in our case series but warrants for further studies with a larger study population before establishing it as the treatment of choice in our environment.

Functional Outcome of Operative Management of Humeral Shaft Fractures

Munene P, University of Nairobi, Kenya
Correspondence to: Dr. Peter Munene Gichunge, P.O Box 50953-00200. Email: pmneshi@yahoo.com

Background: Humeral shaft fractures, account for 3% of all orthopaedic injuries. Most are managed conservatively, however non-union is common thus surgery required for optimum outcome. This was a study on the functional outcome of operative management of humeral shaft fractures. Methods: 45 patients with humeral shaft fractures were selected. Relevant information was recorded in a trauma sheet. Pre-Op planning was done. Recruited patients were followed up for a period of six months post-operatively to determine management modality.
and functional outcome. **Results:** All 45 patients were managed operatively by dynamic compression plating. Mean age was 34.6 years. Men were 68.9% (31/45). 38 patients were right handed, rest left. 26 patients had right humeral shaft fractures while 19 had left. The median shoulder functionality scores in the different age groups ranged from 80 to 85 out of 100. The oldest group (45 years>) had lower scores. Duration of healing was about 6 months. **Conclusion:** Results indicate operative management of humeral shaft fractures results in good functional outcomes with few complications and better preservation of joint function. Operative management by plating is favored for internal fixation. In resource-good setups plating of humeral shaft fractures can be done with good functional outcomes and healing potential. Precaution should be made to avoid damage to the radial nerve.

**B9/3 Pin Tract Infection after Uniplanar External Fixation**

**Rashid M, Atinga J, Sitati F,** University of Nairobi, Kenya  
**Correspondence to:** Dr. Muhammed Rashid, P.O Box 30197-00100.  
Email: mohdrashid828@gmail.com

**Background:** Pin tract infection is the most common complication of external fixation accounting for 43% of complications. The presence of a pin tract infection reduces the pin-bone interface strength which leads to subsequent pin loosening. Pin tract infection also delays conversion of an external fixator to an internal fixation until clearance of the infection is completed. The incidence of pin tract infections following uniplanar external fixation of open fractures in the local settings is not known. **Methodology:** Consecutive sampling of patients who have undergone uniplanar external fixation at Kenyatta National Hospital was done between September 2016 and December 2016. 73 patients were recruited. Data concerning presence of pin tract infection was collected. Patients with discharging sinuses had a culture and sensitivity done while those with major pin tract infection (infections that cause loosening of pins) had immediate x-rays done to rule out radiological changes. **Results:** Incidence of pin tract infection was 87.7% (64 of 73 patients). Staphylococcus aureus (30.2%) and coagulase negative staphylococci (16.3%) were the commonest causative organisms. Other common organisms were Proteus species and Pseudomonas species. **Conclusion:** The incidence of pin tract infection after uniplanar external fixation is high. Better surgical technique and pin-site care is advised. Staphylococcus aureus is the leading cause of pin site infection.
**B9/4  Intimate Partner Violence Resulting in Bilateral Amputation of Forearms**

Omondi GPO, PCEA Kikuyu Hospital, Kenya.

Correspondence to: Dr. Grace Omondi, P.O.Box 1754-00502 Nairobi, Kenya. Email: grace.p.omondi7@gmail.com

Intimate Partner Violence (IPV) is a vice that commonly goes unnoticed resulting in a vicious cycle enabled by the silence culture. There exist laws that offer protection to the victims but which only come into play once a report is made to the appropriate authorities. Identification of an IPV victim by a health care provider is crucial in their management and subsequent rehabilitation. As healthcare providers, we can take a further step of reporting the vice to the authorities to ensure the patient's safety. Going the extra mile not only compliments the treatment given to the IPV victim but also ensures that the silence culture is curbed and vicious cycle broken. This case report therefore encourages the adoption of mandatory reporting of IPV by healthcare professionals who encounter IPV victims.

---

**B9/5  Post Operative Delirium in Spine Patients: The Lessons Learned**

Lawani O, Fort University College Hospital, Ibadan, Nigeria

Correspondence to: Dr. Olukemi Lawani, PMB 2009 Yaba, Lagos, Nigeria. Email: olukemilawani@gmail.com

**Introduction:** Delirium is an acute decline in cognitive function and attention and represents acute brain failure. Post operative alterations in attention and consciousness in Spine patients is a pathway to significant morbidity. The risk factors for delirium are well documented and relate to degree of operative stress, anaesthetic agents and pre operative presence of psychopathology. **Methods:** We compared our classic historic cases of post operative delirium with our recent experience in order to elucidate the risk factors and management in our environment with particular emphasis on early diagnosis and aggressive management. **Results:** There were four cases of post op delirium noted after spine stabilization for lumbar canal stenosis noted between 2014-2016. Common factors to these cases include prolonged surgery greater of 5-6 hours, the use of Pentazocine and post-operative sepsis. There were three cases noted between 2016 till date. Common factors in these later cases include prolonged surgery. The earliest symptom in all patients was an alteration of sleep pattern. Anticipation and earlier recognition have led to prompt intervention in our more recent cases with avoidance of morbidity specifically prolonged hospital stay, wound sepsis and mortality. While Risperidone is the most commonly prescribed medication for treatment by the psychiatrist, Haloperidol given promptly is also beneficial in
preventing the deteriorating of early symptoms into established delirium. **Conclusion:** Delirium in spine patients is predictable, preventable and when identified best treated promptly.

---

**RAFFLE DRAW**

Kindly note that KOA will be having a raffle draw to reward the delegates who visited the stands.

How to participate:

1. Pick your raffle ticket everyday from the registration desk
2. Kindly get a signature adjacent to the name of the company to be eligible to the raffle draw (P.S This is where the fun is, the company with the stamp is unknown & changes hence you have to visit all the stands!!)
3. Drop your duly Signed raffle ticket at the registration desk. Winners of the raffle will be announced at the Gala Dinner and for one to be eligible, all spaces must be signed. Please keep the counter of your ticket safe
4. Two winners will be announced everyday

**PRIZES**

1. 1st Runner up Complimentary Gift Hamper (BAG)
2. Runner up Complimentary registration during KOA next year conference
3. Winner Complimentary Accommodation at the venue
### Abbreviated Time Table

<table>
<thead>
<tr>
<th>Date</th>
<th>0800 - 0830</th>
<th>0830 - 0850</th>
<th>0900 - 1030</th>
<th>1030 - 1115</th>
<th>1115 - 1215</th>
<th>1215 - 1230</th>
<th>1245 - 1400</th>
<th>1400 - 1430</th>
<th>1430 - 1600</th>
<th>1600 - 1700</th>
<th>1700 - 1730</th>
<th>1730 - 1830</th>
<th>1830-1930</th>
<th>1930 - 2100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wed 21st June 2017</strong></td>
<td>Registration</td>
<td>Didactic Session</td>
<td>Tea</td>
<td>Didactic Session</td>
<td>Lunch</td>
<td>Hands On Session</td>
<td>Tea</td>
<td>SPORTS</td>
<td>AGM</td>
<td>Welcome Reception</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Thur 22nd June 2017</strong></td>
<td>Preliminaries</td>
<td>Session 1</td>
<td>Session 2</td>
<td>Tea</td>
<td>Session 3 Opening Ceremony</td>
<td>Lunch</td>
<td>Session 4</td>
<td>Session 5</td>
<td>Session 6</td>
<td>Tea</td>
<td>SPORTS</td>
<td>Gala Dinner</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fri 23rd June 2017</strong></td>
<td>Preliminaries</td>
<td>Session 7</td>
<td>Session 8</td>
<td>Tea</td>
<td>Session 9</td>
<td>Session 10</td>
<td>Lunch</td>
<td>Session 11</td>
<td>Session 12</td>
<td>Session 13</td>
<td>Tea</td>
<td>SPORTS</td>
<td>Council Meeting</td>
<td>Dinner</td>
</tr>
</tbody>
</table>

**KEY**
- Red: Plenary Session – Arabuko Hall
- Blue: Parallel Session – Arabuko/Dodori
- Green: Case Discussions – Arabuko Hall

### Parallel Session Time Table

<table>
<thead>
<tr>
<th>Venue A - Arabuko Hall</th>
<th>Venue B - Dodori Hall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 2</td>
<td>Foot and Ankle</td>
</tr>
<tr>
<td>Session 5</td>
<td>Basic Science</td>
</tr>
<tr>
<td>Session 8</td>
<td>Knee Arthroscopy</td>
</tr>
<tr>
<td>Session 9</td>
<td>Shoulder Arthroscopy</td>
</tr>
</tbody>
</table>

Sessions 1, 3, 4, 6, 7, 10, 11, 12 and 13 will be in the Arabuko hall.
The Opening Ceremony and the AGM will be held in the Arabuko hall.