Theme: "Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations,"
Dear friends and distinguished colleagues,

On behalf of ASPAE, It is with great pleasure I welcome you all to the 13th Annual General Scientific Conference and Meeting of ASPAE. The theme of this year's conference: "A comprehensive approach to Paediatric endocrine disorders in a resource-limited setting: clinical and diagnostic perspective." Targets precisely key issues affecting paediatric endocrine practice in Africa. This year will mark the 100th anniversary of the discovery of insulin, yet in Sub Saharan Africa, patients with diabetes are still grappling with access to this life-saving drug. While we celebrate the centenary of insulin discovery, it is also an opportunity to ask pertinent questions about why this vital medication is still inaccessible to most children with type 1 diabetes living in Africa. There is a need to find lasting solutions to change this narrative so that insulin access can reach all ends of Africa.

In this edition of our yearly gathering, we included a series of webinars leading to the main conference. I hope you found the talks interesting and enriching. Once again, we will continue with the virtual meeting because of the ongoing pandemic. Still, we hope that we will have an opportunity to appear in person at the next year's conference. We have international speakers from across the globe who are experts in their fields drawn from ESPE /ISPAD/ASPAE. It promises to be an exciting experience with the opportunity to learn and Keep Up To Date with state of the art, cutting edge advances in the field of paediatric endocrinology.

The ASPAE exco has concluded plans to upgrade our website to perform the following:- membership registration and online payment of annual dues. These actions will significantly boost the membership base and improve the financial capacity of our great association and ultimately move our society forward.

I am truly grateful to the local organising committee chair Dr Thereza Piloya and members of the LOC team, the ASPAE exco committee and the technical crew from the MEDICS management services Kenya who had worked tirelessly in putting everything together. Many thanks also to our platinum sponsors Novo Nordisk for the financial support. Thanks also to the Ugandan association and CDIC for their support. We are immensely grateful to ESPE AND ISPAD for their unalloyed support in ASPAE activities and for overseeing the success of this conference. We are deeply thankful for the speakers who have given us their time and accepted to share their knowledge with us. Many thanks to all the participants of this conference for giving us your time.

This year marks the end of my tenure as the president of ASPAE. I wish to thank immensely executive committee members for their support and cooperation throughout our tenure. It was a delight and a great learning experience working with everyone.

I wish the incoming president and management a successful term. I see ASPAE becoming the future leading society in paediatric endocrinology. Long live ASPAE.

Professor Maryann Ugochi Ibekwe
ASPAE President
Dept of Paediatrics, College of Medicine Ebonyi State University Abakaliki Ebonyi State, Nigeria
Dear colleagues and family,

On behalf of the African Society for Pediatric and Adolescent Endocrinology it is our great pleasure to welcome you to the 13th Annual ASPAE Virtual Conference which will take place from 23rd to 25th of February 2022. This annual conference is a virtual meeting, which will allow you to network and connect with regional and international experts in diabetes and Endocrinology.

The theme of this conference is "Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations."

COVID-19 pandemic has had an impact on the health of children & adolescents and health systems of many nations. COVID-19 and its control policies have resulted in major disruptions in the screening, treatment, and surveillance of other diseases with much of the resources including financial & human resources geared towards controlling the COVID-19 pandemic. This has implications for children and adolescents living with Non communicable diseases like Diabetes Mellitus and other endocrine disorders. As ASPAE, there is a realisation to provide best practices that would maintain the quality of care for diabetes and Endocrine disorders in Africa amidst the pandemic.

The Meeting will update you with information on best clinical practices and research in the field of paediatric diabetes and endocrinology and innovations in the provision of continuity of care in the pandemic setting. This year’s scientific programme will include Plenary, Symposia lectures and research sharing by practising clinicians, social workers, dietitians, and researchers.

We are fortunate to have the support from sponsors; Novo Nordisk and Sonia Nabeta Foundation who have contributed in a big way towards the success of this conference. I wish to thank all the members of the Local Organising Committee, ASPAE Executive committee and the Uganda Ministry of Health- NCD Division who together made the conference possible. We thank all those who submitted their work to this conference.

We look forward to your participation and sharing our experiences in the Virtual ASPAE 2022 Conference.

Welcome,

Dr. Thereza Piloya-Were  
Chair, ASPAE Conference 2022  
Senior Lecturer, Department of Paediatrics and Child Health, College of Health Sciences, Makerere University.
Thereza Piloya Were
Chair Local organizing committee (ASPAE 2022)

Cissy Nalunkuma
Scientific committee LOC

Albert Kamugisha
ASPAE 2022 scientific committee

Wenceslaus Sseguya
Member of Local organizing committee

Ojilong Jeofrey
Committee Member LOC

Ms. Juliet Biculi
Administration / coordination Uganda Loc
CONFERENCE SPEAKERS

Angie Middlehurst, General and Paediatric Nurse and Paediatric Diabetes Educator.

She has been involved in childhood and adolescent diabetes for 27 years.

Angie was Deputy Manager and Education Director for the Life for a Child (LFAC) Program based at Diabetes NSW in Sydney, Australia from 2011-2018.

Angie’s passions are advocacy for global insulin and diabetes supplies access; management of diabetes at school; diabetes camps and transition from paediatric to adult care.

She has presented at international conferences and travelled to many less-resourced countries to assess the local situation and needs, attending diabetes camps and conducting parent and health professional education and training workshops on behalf of LFAC, ISPAD, CLAN and CDiC.

Angie continues to volunteer for diabetes organizations: ISPAD, LFAC, CLAN, IFL, JDRF and Pen Pals United.

Dr. Asmahan T Abdalla

MD, Paediatrics, SMSB, 2014
PETCA/ESPE Fellowship (ped), 2015
Paediatric Endocrinologist and Diabetologist at Sudan Childhood Diabetes Centre in Khartoum.

Changing Diabetes in Children (CDIC) - Sudan Project Manager, 2020
Special interest in metabolic/rare/ and bone diseases in children and the founder of the first rare disease clinic in Khartoum, 2018
CONFERENCE SPEAKERS

Dr. Angelica Badaru, MBBS, MRCP

Dr Badaru is adjunct faculty with the division of pediatric endocrinology at the University of Minnesota. She graduated from the College of Medicine University of Lagos, Nigeria and received her pediatric residency training in the United Kingdom. Dr Badaru completed her pediatric endocrine fellowship at the Stanford school of medicine in California. Prior to joining the University of Minnesota in 2017, she was faculty with the pediatric endocrine division at the Yale School of Medicine. Angelica’s global health focus has been in clinical pediatric endocrinology and the training of aspiring pediatric endocrinologists and endocrine nurses. In this capacity she has recently taught and volunteered in Kenya, Nigeria, Cambodia, Botswana and Cameroon. Angelica currently lives with her husband and three children in Brussels Belgium.

Prof Antoinette Moran

Professor Moran is a pediatric endocrinologist at the University of Minnesota. She has extensive experience in clinical research and has been continuously funded since 1987 by the NIH, foundations and industry, with ~200 peer-reviewed publications. She has mentored multiple undergraduates, medical students, residents, fellows, and junior faculty. She has been visiting East Africa since 2007, working with the pediatric diabetes program at Mulago Hospital and in various roles within PETCA. She has sponsored African physicians, nurses and pharmacists to visit Minnesota for training, and has travelled with a Minnesota diabetes team to Africa for numerous “train-the-trainers” events.
CONFERENCE SPEAKERS

Carol Brunzell

Carol Brunzell RDN, LD, CDCES, FAND is a Registered Dietitian Nutritionist and a Certified Diabetes Care and Education Specialist the University of Minnesota, M Health Fairview in Minneapolis, Minnesota. She works with pediatric patients with type 1 and 2 diabetes, cystic fibrosis related diabetes, and celiac disease and diabetes. She has given numerous professional presentations to international, national, state, and local audiences and has authored and co-authored many professional articles and book chapters about diabetes and nutrition therapy. She has traveled with her pediatric diabetes endocrine team to East, West, and South Africa several times since 2012 teaching diabetes management to health care professionals and working with pediatric patients with type 1 diabetes in clinics.

Prof Jan Lebl

Jan Lebl is a paediatric endocrinologist at Department of Paediatrics, 2nd Faculty of Medicine, Charles University in Prague, Czech Republic. His research is focused on molecular aspects of beta-cell disorders, and genetics of short stature. He published over 250 original articles and lectured in over 40 countries worldwide. He served as the ESPE Clinical Fellowship committee secretary from 2002 to 2011. In 2009-2010, he was the ESPE president and organised the 49th ESPE Annual Meeting in Prague. Since 2010 to 2016, he chaired the ESPE Education and Training Committee and actively participated at several ASPAE meetings. Since 2021, he serves as ESPE convenor for the sub-Saharan African training centres in paediatric endocrinology – PETCA and PETCWA.
CONFERENCE SPEAKERS

Dr Chizo Agwu
MBBS, MRCP, PCME, MSc, FRCPCH, RCPPathME.

I am a Consultant Paediatrician in Diabetes and Endocrinology and Deputy Medical Director at Sandwell and West Birmingham NHS Trust and Hon Snr Clinical Lecturer/MBChB Deputy Admissions Tutor at University of Birmingham. I am on the expert panel of the National Institute for Clinical Excellence (NICE) in United Kingdom and am the Vice chairman of the NICE Diabetes Update committee responsible for producing national evidence-based guidance and advice for health, public health and social care practitioners.

I am the International Society for Paediatric and Adolescent Diabetes (ISPAD) liaison representative on the PETCA/PETCWA Taskforce which supports the training of paediatric endocrinologist in Africa. I am course director leading on developing a paediatric diabetes educator course (ADECA) for nurses working in Africa. I am the Immediate Past National Chairman, Association of Children’s Diabetes Clinicians (ACDC) United Kingdom and remains on the executive committee of ACDC. My research interests include care of children with diabetes and medical Education.

Dr Edna S. Majaliwa is a pediatric endocrinologist, working at Muhimbili National Hospital, Tanzania. She is one of the founders of pediatric Diabetes services in Tanzania. She is involved in different projects on Diabetes and endocrine conditions. She has scientific publications in different journals as well as a manuscripts reviewer of different journals.

She has a special interest in improving care in Diabetes in children from limited resources in the African continent. Her interests are genetics of Diabetes in children from African, living in Africa, diabetes care in children in Africa as well as their outcome. She is a member of Paediatric Association of Tanzania (PAT), Medical Women Association of Tanzania (MEWATA), ASPAE, ISPAD, and ESPE.
CONFERENCE SPEAKERS

Prof Abiola

Maryann Ugochi Ibekwe is a Professor of Paediatrics at the Ebonyi State University Abakaliki. She is a fellow of the West African College of Physicians. She received the fellowship training in Paediatric Endocrinology from the Paediatric endocrine Training Center Africa in Nairobi, Kenya, in 2011. This was sponsored by the European Society for Paediatric Endocrinology (ESPE). She also attended the Clinical fellowship in Paediatric Endocrinology with the Birmingham Children’s Hospital NHS Trust UK in 2012. She is currently a consultant and the clinical lead of Paediatric Endocrinology of the Dept of Paediatrics Alex Ekwueme Federal University Teaching Hospital Abakaliki, Nigeria.

She is the Founding President of the DIAPAED club. A club whose aim is to advocate for a better quality of life in children and adolescents with diabetes mellitus through public enlightenment, education and research. She has served the African Society for Paediatric and Adolescent Endocrinology (ASPAE) in the capacity of an Editor from 2016 to 2018, as the vice president from 2018 to 2020 and currently as the president from 2020 till date.
CONFERENCE SPEAKERS

Mohamed Ahmed Abdullah MBBS FRCPCH FRCP DCH DTCH.Professor and head of Pediatric and Adolescent Endocrinology, Faculty of Medicine University of Khartoum Sudan. Graduated from University of Khartoum and did his postgraduate training in Uk.

Currently Chairman Council of Pediatric Endocrinology Fellowship Program Sudan Medical Specialization Board. President of Sudan Society for Pediatric Endocrinology and Diabetes, President Sudanese Childhood Diabetes Association, and director Sudan Childhood Diabetes Center. Member of many regional and International endocrine and diabetes societies and holds the ISPAD(International Society for Pediatric and Adolescent Diabetes) Lestradet Award for Education and Advocacy and in 2017 honored by giving the opening ceremony plenary lecture in the pediatric endocrine Societies meeting in Washington Has been Awarded the Ibn Sina Award for distinguished endocrinologists in the region by AACE Gulf chapter in 2018. He also holds the award of Doctors of Humanity in Sudan.

Has many publications in this field, reviewer to many journals, supervised many postgraduate thesis including PhDs and MDs. Main area of research interest diabetes, congenital hypothyroidism, adrenal disorders and DSD. Has great interest in establishing pediatric endocrinology and diabetes services in limited resource settings.

mohamedabdullah@hotmail.com
+249912350604
CONFERENCE SPEAKERS

Silver Bahendeka

Silver Bahendeka, FRCPI, PhD is an Hon. senior consultant physician, diabetes and endocrinology, St. Francis Hospital, Nsambya, Kampala, and Hon. Professor, Diabetes and Endocrinology, at the Mother Kevin Post Graduate Medical School, Uganda Martyrs University, Kampala, Uganda. He is the current Chair, East Africa Diabetes Research Group (EADSG); and Chair Education Chambers, Diabetes Africa. He is the past Chair, International Diabetes Federation (IDF) Africa Region, 2009 - 2013. His research interest is in Beta cell function and pathogenesis of type 1 diabetes and is author or co-author of over 100 peer reviewed publications.

Pr Asmahane Ladjouze

Pr Asmahane Ladjouze
Paediatric endocrinologist
Chief of Unit, Bab El Oued Hospital, Algiers Algeria
Senior Lecturer, Medical school of Algiers, ALGERIA

1993: French Baccalaureat (Lycée Français d’Alger)
1994-2000: Medical study in Paris V university, France
2001-2005: Paediatrics Residency in Strasbourg university, France
Paediatric endocrinology and diabetology Diploma in Paris University
2005-2006: Paediatric endocrinology in Paris (Robert-Debré) and Trousseau Hospital
2007: Professor assistant in Paediatrics, Algiers University, Bab el Oued teaching Hospital
2016: Senior Lecturer in Paediatrics, Algiers university, Bab el Oued teaching Hospital
2020-2021: One year as Paediatric endocrinologist in Nice Teaching Hospital, France
Other activities:
ESPE member, Member of GPED, ASPED memeber
Actual coordinator of the ESPE Maghreb school

Conferences and Publications (in the CV)
CONFERENCE SPEAKERS

Born in 1979, Pr Suzanne Sap née Ngo Um is a paediatric endocrinologist, working in Mother and Child Center of Chantal Biya Foundation in Yaoundé in the last 10 years. She was a fellow in Robert Debré Hospital in France. She opened the first service of paediatric endocrinology and diabetes in Cameroon. She is associate professor of paediatrics in faculty of medicine and biomedical sciences of the Yaounde I University.

She works to improve training in field of endocrinology and diabetes in the country as focal point of Cameroon Paediatric Society. Active member of African Society of Paediatric and adolescent endocrinology, she is also member of International Society of Paediatric and Adolescent Diabetes, and French society of paediatric endocrinology. She actively works in organization of African diabetes congresses and participated in expert meetings on management of children management in central and east Africa. Clinical research is an essential part of her work, with different publications on disorders of sexual differentiation, diabetes. She is actively acting on availability of different hormone treatment through advocacy, and initiation of parents of patient’s associations. She had two letters of congratulations from 2 different ministers in 2020.

Her family duties are very important for her as a mother of 4, but she find time to her hobbies: swimming, cultural activities (dance and singing).

Thomas Ngwiri is Head Clinician at Gertrude’s Children’s Hospital since February 2010. He is also Director of the Paediatric endocrinology training centre for Africa (PETCA) - Nairobi which trains paediatricians from sub-Saharan Africa in the field of diabetes and other endocrine disorders. He is the Program Lead for the Kenya Paediatric Fellowship Program (KFPF) at KPA. He has been a member of the Kenya Paediatric Association board since 2010 and is the immediate former National Chair of the association. He has previously served on the executive committee of the Africa society for Paediatric and Adolescent endocrinology (ASPAE). Thomas Ngwiri has published work on diabetes mellitus in children and on developing education programs in paediatric endocrinology in Africa.
CONFERENCE SPEAKERS

Esther Kemunto Kerina

I am a full-time Nutritionist at Aga Khan University Hospital Nairobi. I hold a master of science degree in Food Nutrition and Dietetics and a Bachelor of Science degree in the same from Kenyatta University. Besides, I hold a post-graduate diploma in pediatric nutrition from Boston University (USA).

My 15 years work experience majorly at Aga Khan University, Diabetes Care Center Nairobi and Kenyatta National Hospital has given me a solid base upon which I am building my career.

I have a passion in pediatric nutrition and type 1 diabetes.

Vivian Nabeta

Vivian Nabeta is the Founder of the Sonia Nabeta Foundation aka SNF where we believe in an Africa where children with type 1 diabetes have an equal chance at long, healthy, productive and gainful lives. With over 10 years at the United Nations Development Programme (UNDP), she has managed a variety of project portfolios in several sectors including energy, environment and public health.

She has also worked extensively on South-South cooperation, regional integration and triangular cooperation issues at UNDP. Previously, she worked as a Project Engineer at Rizzo Associates in Hartford, Connecticut and as an Associate at the International Finance Corporation (IFC). Ms. Nabeta holds an MBA in Finance and Strategic Management from the Wharton School, University of Pennsylvania and a BSc and MASc in Environmental Engineering from the University of Windsor in Canada.
Dr. Muna Sunni is an assistant professor in the Department of Pediatrics at the University of Minnesota School of Medicine and serves as the director of the pediatric endocrinology fellowship program at the University of Minnesota. Dr. Sunni earned her medical degree at Tripoli University, Tripoli, Libya, her pediatric residency training at Memorial University Medical Center, Mercer University School of Medicine, Georgia, United States, her Pediatric Endocrinology and Diabetes Fellowship Training and her Master’s in Clinical Research at the University of Minnesota, Minneapolis, Minnesota, US.

Dr. Sunni’s clinical interests involve diabetes, weight management, and thyroid disorders especially thyroid nodules & thyroid cancer. Dr. Sunni’s research interests involve studying diabetes in pediatrics with a special interest in diabetes in the Somali immigrant community.

Dr. Sunni’s a member of several professional societies such as the Pediatric Endocrine Society, the American Academy of Pediatrics, ISPAD and the American Medical Association.
Dr Senthil Senniappan has been working as Consultant Paediatric Endocrinologist at Alder Hey Children’s Hospital, Liverpool for 8 years. He is the Clinical Director for Endocrinology and an honorary Associate Professor at University of Liverpool.

Dr Senniappan trained as endocrinologist in Manchester and London. He completed PhD at Great Ormond Street Hospital, London. He has published more than 60 peer reviewed PubMed index articles including publications in NEJM and Human Molecular Genetics and several book chapters. He leads several research projects and supervises research students. His areas of interest within endocrinology include congenital hyperinsulinism, hypoglycaemia, DSD, andrology and childhood obesity. He has won several awards and he is passionate about teaching/training. He is the quality advisor for endocrinology CSAC at RCPCH and a regular MRCPCH Examiner. He is the POC chair for BSPED and secretary of the ESPE clinical fellowship committee and ESPE Webinar Convenor.

Dr Senniappan is the Clinical Lead for complex obesity MDT service (ALDER CEW) and co-lead for NSHE Commissioned Quaternary congenital hyperinsulinism (CHI) service. Dr Senniappan provides ongoing clinical care to children and young people with complex obesity and associated complications including sleep apnoea, fatty liver, diabetes mellitus and intracranial hypertension. He is supported by a team of dedicated multidisciplinary professionals including dieticians, psychologists, physician associate, fellows, physiotherapists, key worker and specialist nurses.

Dr Senniappan leads the clinical research in the area of congenital hyperinsulinism and childhood obesity and has established links with the various services/researchers in the city through the Liverpool Obesity Research Network (LORN).
He is a professor of Medicine and Global Health. He is a Member of the Board of World Diabetes Foundation and Hon. General Secretary of Tanzania Diabetes Association (TDA), Tanzania NCD Alliance (TANCDA) and Chair, Association of Private Health Facilities of Tanzania (APHFTA).

Professor Ramaiya served as Chair of sub-Saharan Africa Region of International Diabetes Federation (IDF) from Year 2000 to 2006 and then as a Vice-President (Global) of IDF from Year 2007 to 2012.

During his tenure as the Chair of the sub-Saharan Africa Region, several tools were developed for the region in three major languages: English, French and Portuguese like Diabetes Education Manual for Diabetes Educators in the region.

He has greatly contributed to a better understanding of diabetes in the African region. He has been actively involved in research on diabetes for many years.

At present, he is working with children who have Type 1 diabetes, gestational diabetes, metabolic syndrome and cardiovascular complications of antiretroviral drugs in HIV/AIDS and Diabetes/TB interaction.
**Day 1: 23rd FEBRUARY 2022**

**Theme:**
“Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations,”

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00 - 09:15 AM</td>
<td>Prevalence and factors associated with microalbuminuria in type diabetes in two tertiary hospitals in Uganda</td>
<td>Dr. Sanyu Kirabo</td>
</tr>
<tr>
<td>09:15 – 9:30 AM</td>
<td>Prevalence, patterns and factors associated with ocular manifestations of T1DM among children and adolescents attending a tertiary hospital in Uganda.</td>
<td>Dr. Juma Paul Bihemo</td>
</tr>
<tr>
<td>09:30 – 9:40 AM</td>
<td>T1DM and Epilepsy: A case report in Cameroon</td>
<td>Dr. Rita Mbono Betoko</td>
</tr>
<tr>
<td>09:40 – 10:00 AM</td>
<td>PANEL DISCUSSION</td>
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**Moderator**
Dr. Cissy Nalunkuma

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<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>10:00 – 10:10 AM</td>
<td>Welcome Note Chairperson LOC</td>
<td>Thereza Piloya</td>
</tr>
<tr>
<td>10:10 – 10:20 AM</td>
<td>Grand Opening ASPAE President</td>
<td>Maryann Ugochi Ibekwe</td>
</tr>
<tr>
<td>10:20 – 10:30 AM</td>
<td>Opening Remarks ESPE Coordinator</td>
<td>Prof. Jan Lebl</td>
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</table>

**SESSIONS**

**Sub Themes**
**PLENARY**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>10:30 – 10:50 AM</td>
<td>Paediatric Endocrine Care in Africa: SWOT ANALYSIS; STATUS UPDATE</td>
<td>Dr. Thomas Ngwiri</td>
</tr>
<tr>
<td>10:50 – 11:10 AM</td>
<td>T1DM management in Low resource countries: What are the Priorities?</td>
<td>Prof. Silver Bahendeka</td>
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<td>11:10 – 11:30 AM</td>
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<td>NCD Officia</td>
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<tr>
<td>11:30 – 11:45 AM</td>
<td>PANEL DISCUSSION</td>
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**BREAK (15MINS)**
### Day 1: 23rd FEBRUARY 2022

**Theme:**
"Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations,"

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 – 12:20 PM</td>
<td>Short Stature: Perspectives in Africa, Changing Spectrum and Current Management</td>
<td>Prof Mohamed Abdullah</td>
</tr>
<tr>
<td>12:20 – 12:40 PM</td>
<td>Practical Approach to Diagnosis of DSD and Management: Challenges and Success</td>
<td>Dr. Susan Sap</td>
</tr>
<tr>
<td>12:40 – 01:00 PM</td>
<td>Timing of Surgery and Sex assignment in DSD: Current Perspectives</td>
<td>Dr. Esam Abdelagaleel</td>
</tr>
<tr>
<td>01:00 – 01:20 PM</td>
<td><strong>PANEL DISCUSSION</strong></td>
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</table>

**LUNCH BREAK (40MINS)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>02:00 – 02:20 PM</td>
<td>COVID-19 &amp; Diabetes : Updates</td>
<td>Prof. Antoinette Moran</td>
</tr>
<tr>
<td>02:20 – 02:40 PM</td>
<td>Current Medications used in T2DM in Paediatrics</td>
<td>Prof. Muna Sunni</td>
</tr>
<tr>
<td>02:40 – 03:00 PM</td>
<td>Exploring Virtual Nutrition Education/ Management in T1DM for Africa</td>
<td>Carol Brunzell</td>
</tr>
<tr>
<td>03:00 – 03:15 PM</td>
<td><strong>PANEL DISCUSSION</strong></td>
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</tbody>
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**CLOSING SESSION**
**Day 2: 24th FEBRUARY 2022**

**Theme:**
"Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations,"

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
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</thead>
<tbody>
<tr>
<td>10:00 – 10:20 AM</td>
<td>Bleeding per vagina in prepubertal children</td>
<td>Dr. Chizo Agwu</td>
</tr>
<tr>
<td>10:20 – 10:40 AM</td>
<td>Pubertal Timing: Who should we treat</td>
<td>Dr. Angela Badaru</td>
</tr>
<tr>
<td>10:40 – 10:00 AM</td>
<td>PANEL DISCUSSION</td>
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</table>

**ABSTRACT**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 – 11:15 AM</td>
<td>Prevalence and Factors Associated with Hypothyroidism in Children with Sickle Cell Anemia Aged 6 Months -17 Years Attending the Sickle Cell Clinic, Mulago Hospital, Uganda; A cross-sectional study.</td>
<td>Dr. Gloria Kaudha</td>
</tr>
<tr>
<td>11:15 – 11:30 AM</td>
<td>Adverse Effects of COVID-19 control measures on Type 1 Diabetes Mellitus care: a report of 3 cases.</td>
<td>Elizabeth Oyensusi</td>
</tr>
</tbody>
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**BREAK (15MINS)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>11:45 – 12:10 PM</td>
<td>100 years of insulin: where have we been and where are we going in Africa</td>
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<tr>
<td>12:10 – 12:25 PM</td>
<td>Access to insulin and impact on patients: Experience in Abakaliki Nigeria</td>
</tr>
<tr>
<td>12:25 – 12:45 PM</td>
<td>Diabetes Education ; Practicability in Africa</td>
</tr>
<tr>
<td>12:45 – 01:00 PM</td>
<td>PANEL DISCUSSION</td>
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</tbody>
</table>

**LUNCH BREAK (60MINS)**
Day 2: 24th FEBRUARY 2022

**Theme:**
"Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations,"

<table>
<thead>
<tr>
<th>Day 2:</th>
<th>24th FEBRUARY 2022</th>
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<tbody>
<tr>
<td><strong>Moderator</strong></td>
<td><strong>Dr. Joyce Mbogo</strong></td>
</tr>
<tr>
<td><strong>SYMPOSIUM</strong></td>
<td><strong>NOVO NORDISK</strong></td>
</tr>
<tr>
<td><strong>Sub Themes</strong></td>
<td><strong>INSULIN@ 100 YEARS</strong></td>
</tr>
<tr>
<td>02:00 – 03:00 PM</td>
<td><strong>DISCUSSION</strong></td>
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**Guidelines for AFRICA**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>03:00 – 03:30 PM</td>
<td>T1DM Clinical Guidelines for Africa: Gaps in existing Guidelines</td>
<td>Edna Majaliwa / Asmahan (Sudan)</td>
</tr>
<tr>
<td>03:30 – 03:50 PM</td>
<td>Factors associated with type I diabetes: a multicentric case control study in Cameroon</td>
<td>Susan Sap</td>
</tr>
<tr>
<td>03:50 – 04:00 PM</td>
<td><strong>PANEL DISCUSSION</strong></td>
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</tbody>
</table>

**CLOSING SESSION**
### Day 3: 25th FEBRUARY 2022

**Theme:**
"Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations,"

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<td>Approach to Screening for Metabolic Diseases in Africa</td>
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<td>10:40 – 10:50 AM</td>
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ASPAE 13TH CONFERENCE PROGRAM 23rd – 25TH FEBRUARY 2022

13th Annual Conference
## Theme:
"Sustaining Paediatric Diabetes Mellitus and Endocrine care in the COVID-19 era; exploring emerging challenges, insights and innovations,"

### Day 3: 25th FEBRUARY 2022

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<td>Low serum vitamin D levels and associated factors among diabetic children in Uganda.</td>
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Prevalence, patterns and factors associated with ocular manifestations of type 1 diabetes mellitus among children and adolescents attending a tertiary Hospital in Uganda.

**Background:** Type 1 diabetes mellitus constitutes about 5-10% of all people with diabetes mellitus and more than 90% occurs in children with an annual incidence of 3% worldwide. Ocular manifestations due to type 1 diabetes mellitus, cause visual impairment and blindness resulting into school dropout and accident.

**Objectives:** To determine the prevalence, patterns and factors associated with ocular manifestation among children and adolescent patients with type 1 diabetes mellitus attending pediatric diabetes clinic at Mulago National Referral Hospital.

**Methods:** In a hospital-based cross-sectional study, children and adolescents aged 4 years to 19 years living with type 1 diabetes mellitus seen at pediatric diabetic clinic at Mulago National Referral Hospital from July to September 2021 were recruited. Data collected were analyzed using STATA version 15.0.

**Results:** Of the 118 participants enrolled, majority were females 70(59.3%), mean age was 13.3±4.2SD years. The prevalence of ocular manifestation was 34.8%. The most common ocular manifestation found was refractive errors 30 (25.4%) followed by non-proliferative diabetic retinopathy 4 (3.4%). The following factors were found to be statistically significant associated with ocular manifestation: age >5-11years (aPR = 0.32, p-value <0.001), age >11-15years (aPR=0.27, p-value <0.001), and age > 15 years (aPR= 0.31, p-value <0.001), normal body mass index (aPR= 0.43, p-value =0.003), duration of diabetes mellitus of 10 or more years (aPR=2.87, p-value <0.001) and premixed type of insulin injection (aPR=0.22, p-value=0.019).

**Conclusion:** A high prevalence (one in every three patients with type 1 diabetic mellitus) of ocular manifestation was found.

**Key words:** Type 1 diabetes mellitus, ocular manifestations, prevalence, patterns.
Title: Prevalence and Factors Associated with Hypothyroidism in Children with Sickle Cell Anemia Aged 6 Months - 17 Years Attending the Sickle Cell Clinic, Mulago Hospital, Uganda: A cross-sectional study

Authors: Gloria Kaudha*, Mary Goretty Kuteesa, Shamim Namugerwa, Teddy Namubiru, Gloria Owomugisha, Stella Alinafe Wachepa, Sanyu Kirabo Lubwama, Thereza Piloya, Victor Musiime, Sarah Kiguli, James Kashugyera Tumwine

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Background: Sickle cell anemia (SCA) leads to chronic end organ damage including the thyroid gland. This is postulated to be due to recurrent hemolysis leading to iron overload, vaso-occlusive crises, micro-vasculature obstruction due to red cell entrapment and frequent transfusions. Some studies have demonstrated a relationship between hypothyroidism and SCA with a prevalence of 6% in children and adolescents. Hypothyroidism may affect brain and physical development.

Objective: This study aimed to determine the prevalence and factors associated with hypothyroidism among children with SCA attending the Sickle Cell Clinic (SCC), Mulago hospital.

Methods: A cross-sectional study of children aged 6 months - 17 years with a confirmed diagnosis of SCA, no prior diagnosis of hypothyroidism and in their steady state attending the SCC in Mulago hospital was conducted.

Data was collected using a structured questionnaire and a blood sample obtained was used to measure thyroid stimulating hormone (TSH) and free thyroxine (FT4). Clinical Hypothyroidism was defined as TSH level >9 mIU/L and free T4 <0.6 ng/dL [primary hypothyroidism] or normal or low TSH level and free T4 < 0.6 ng/dL [central hypothyroidism], and sub-clinical hypothyroidism as TSH ranging between 4.5and10 mIU/L with normal age appropriate free T4 levels that is: 6-11 months [0.9-2.0ng/dl]; 1-5years [1.0-1.8ng/dl]; 6-10 years [1.0-1.7ng/dl] and 11-17 years [1.0-1.6 ng/dl]. Multivariate logistic regression models were constructed to determine the factors associated with hypothyroidism. A p< 0.05 was considered as significant.
Results: Of the 332 children enrolled, 50.3% (167/332) were female; their median age (IQR) was 6 (3-10) years. Sixty (18.1%) participants had hypothyroidism (95% CI: 14.3 — 22.6) of whom all had sub-clinical hypothyroidism. The factors associated with hypothyroidism were constipation [aOR: 3.1, 95% CI:1.0 — 9.0, p=0.043] and male sex [aOR:2.0, 95% CI:1.1— 3.5, p= 0.025].

Conclusions: Approximately 1 in 5 children (18.1%) had hypothyroidism. Males and children who presented with constipation were more likely to have hypothyroidism. This suggests that clinicians should screen all children with SCA who present with constipation for hypothyroidism and those found with hypothyroidism should be treated appropriately to improve their growth and quality of life.

Vitamin D Status among Infants Attending a Reproductive and Child Health Clinic in Arusha, Tanzania: A Cross-Sectional Study

Background: Globally there is a high burden of low serum vitamin D deficiency (VDD) with children being acknowledged at risk due to low vitamin D content in both breastmilk and available foods and inadequate cutaneous synthesis of vitamin D. Even in countries with abundant sunshine, vitamin D deficiency (VDD) remains a problem. There is little characterization of the status of vitamin D among infants in East Africa. This study aimed to determine the prevalence and factors associated with vitamin D deficiency among infants attending the Reproductive and Child Health (RCH) Clinic in Arusha, Tanzania.

Methods: A cross-sectional study of 304 infants aged 6 weeks to 12 months was conducted at Arusha Lutheran Medical Centre (ALMC). Infants were enrolled during the warm season between November 2018 and January 2019. A pre-coded questionnaire was used to collect data on sociodemographic characteristics of the infant with consent from their caretakers. Physical examination was done for anthropometric measures and signs of rickets. Blood was drawn for assessment of serum 25-hydroxyvitamin D 25(OH)D, calcium, phosphorus and alkaline phosphate. Vitamin D deficiency was defined as 25(OH)D level below 20 ng/ml (<50 nmol/L) and Vitamin D insufficiency defined as a 25(OH)D level 20 - 30 ng/ml (50 - 75 nmol/L). Statistical analysis was performed using STATA 14 version and factors associated with VDD explored with multivariate analysis.
Results: The mean serum 25(OH)D among infants was 34.51 ng/ml (±15.53). Vitamin D deficiency was found in 67/304 (22%) infants and Vitamin D insufficiency in 50 (16.5%) infants. Hypocalcemia was observed in 33 (10.9%) infants and clinical findings of rickets were found in 11 infants (3.6%). Factors independently associated with VDD included age < 6 months (Adjusted Odds Ratio (AOR) 1.56, 95% CI 1.19 - 4.0, p value < 0.026), serum signs of rickets and serum hypocalcemia (p-value < 0.001 and <0.002, respectively).

Conclusion and Recommendation: A high prevalence of Vitamin D deficiency (22%) and insufficiency (16.5%) was observed among infants attending RCH Clinic in Arusha, Tanzania. Age < 6 months, a single serum measurement of hypocalcemia and the presence of the clinical sign of rickets were independently associated with VDD. Clinicians should actively assess for VDD and supplement with vitamin D as indicated, especially among infants < 6 months.

Keywords: Vitamin D Deficiency, Rickets, Infants, RCH Clinic, Tanzania

Type 1 Diabetes and Epilepsy: A case report in Cameroon

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Introduction: The risk of epilepsy in children with type 1 diabetes is reported to be 2 to 6 times higher than in the general population. Many pathogenic mechanisms are suggested to explain this association. They include genetic predisposition, autoimmunity especially presence of antiglutamic acid decarboxylase antibodies, cerebrovascular lesions leading to hypoxia, direct effect of hypo or hyperglycemia. Poor glycemic control may increase the risk to have this association. Clinical presentation may be focal or generalized seizures. In sub-Saharan Africa, few data are available about this condition. We report a case of status epilepticus in a known type 1 diabetes boy of 17 years old in Cameroon
A 17 years old boy presented at emergency ward with clonic seizures of the face and the upper limbs for 1-hour duration. Prior to admission, he had headache and difficulty to speak but no fever. He was a known type 1 diabetes patient. He used to receive long-acting insulin and rapid analogs for about 2 years. He stopped his treatment for 6 months prior to this episode of seizure and his last glycated hemoglobin was 151 mmol/mol. At admission, vital parameters were normal. He received diazepam 0.3 mg/kg and phenobarbital 10 mg/kg by intravenous route to prevent new episode of seizure. Two hours after admission, he presented a new episode of seizure who lasted for 2 hours with administration of two bolus of midazolam. Glycaemia was 250 mg/dl and ketones were negative. CT-scan and electroencephalogram were normal. The child was discharged after 4 days and received sodium valproate for oral route.

Conclusion: Type 1 diabetes is a risk factor of epilepsy. Clinical presentation may be focal or generalized seizures. Caregivers should be aware of this condition.

Prevalence and factors associated with microalbuminuria in type 1 diabetes in two tertiary level hospitals in Uganda.

Sanyu I. Kirabo, Kakooza- Mwesige Angelina; Piloya Thereza; Batte Anthony; Cathy Nyangabyaki.

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Background: Diabetic nephropathy is common in the developing world due to poor glycemic control and inadequate treatment at an early stage. Microalbuminuria in persons with Type 1 diabetes mellitus (T1D) indicates a potentially treatable and reversible stage of nephropathy.

Objectives: To determine the prevalence and factors associated with microalbuminuria among children and adolescents with T1D attending two tertiary level facilities in Uganda.

Methods: This was a cross-sectional study conducted at Nsambya hospital and Mulago National Referral Hospital Pediatric Diabetic clinics that included patients aged 2 to 19 years. Participants were tested for urine albumin, urine creatinine, random blood glucose, HbA1c, serum urea, serum creatinine
Microalbuminuria was confirmed with elevated Albumin Creatinine Ratio 30 to 300 mg/g in males and 42 to 300 mg/g in females in a 2 spot morning urine samples taken within 3 months. Data was collected with the aid of structured questionnaires, entered into Epi data 3.1 and analyzed using STATA version 14. Bivariate analysis was used to test the association between microalbuminuria and independent variables; and then multiple logistic regression models of odds ratios were used to determine the factors associated with microalbuminuria at 95% Confidence interval and p< 0.05 level of significance.

Results: A total of 153 participants were enrolled into the study. The median age of participants at the time of study was 8.4 years and 83 (54.2%) of them were male. The median duration of T1D was 4.35 years with a high mean HbA1c of 11.2 ± 2.5%. The prevalence of microalbuminuria was 13.7% [95% CI: 9.1 – 20.2%]; The factors independently associated with microalbuminuria were duration of T1D less than 5 years (aOR 27.44), admission in the previous year (aOR 5.39) hypertension (aOR 19.12) and HbA1c (aOR 1.41)

Conclusion: The prevalence of microalbuminuria at 13.7% is high. Early-onset microalbuminuria, hypertension, elevated HbA1c, history of admission in the previous year are factors that influence the development of microalbuminuria in T1D patients in our setting. Despite ISPAD, early and more frequent screening for microalbuminuria may be warranted in children in our setting. And emphasis on aggressive glycemic control even early after diagnosis cannot be overstated.

Exploring the burden of Metabolic Syndrome in Normal-weight vs Overweight/Obese Adolescents in Lagos, Nigeria

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Study Objectives: Metabolic syndrome is a non-communicable disease that represents a cluster of abnormal physiological and biochemical parameters which could predispose an adolescent to a life-long battle with chronic conditions like cardiovascular diseases and type 2 diabetes.
There is a paucity of data in Nigeria on metabolic syndrome (MS), especially among normal-weight adolescents. This study compared the prevalence and risk factors of metabolic syndrome in overweight/obese adolescents compared to normal-weight adolescents.

**Methods:** This comparative cross-sectional survey was conducted in private and public schools in Mushin Local Government Area of Lagos State. Using a multi-stage sampling technique, the study recruited 518 adolescents (10 to 19 years) from private and public schools. Self-administered questionnaires were used to obtain data. Metabolic syndrome was determined using the modified international diabetes federation (IDF) criteria. SPSS Version 20.0 statistical software was used for analysis. A p-value of < 0.05 was considered significant.

**Results:** Metabolic syndrome was reported in 5.4% of the adolescents reviewed, including 8.1% of overweight/obese and 2.7% of normal-weight adolescents (p = 0.007). Factors such as average daily meal (p = 0.007) and daily pastries consumption (p = 0.035) were significantly associated with metabolic syndrome in overweight/obese but not in normal-weight adolescents. Increased participation in school sports and walking to/from school was significantly associated with a lower prevalence of metabolic syndrome in both overweight/obese and normal-weight adolescents.

**Conclusion:** Even in sub-Saharan countries like Nigeria, where MS was once thought to be non-existent, this study found adolescents with MS regardless of normal weight or obesity. This prevalence may be associated with changing lifestyles in the region. This study, therefore, highlights the need for periodic screening for metabolic syndrome even in adolescents. Health education among adolescents may also be required to advise on the need for regular physical activity and healthy dietary habits.

Clinical Profile, Etiology and Diagnostic Challenges of Primary Adrenal Insufficiency in Sudanese Children: 14-Years’ Experience from A Resource Limited Setting

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Keywords: Primary adrenal insufficiency, children, Africa, Sudan.
Background: Primary adrenal insufficiency (PAI) in children is an uncommon condition. Congenital adrenal hyperplasia (CAH) is the commonest cause followed by autoimmune disorders. Diagnosis and management are challenging especially in a resource limited settings. Many studies have been conducted worldwide, however in Africa, studies are scanty and limited to small series or case reports while others are limited to Addison disease in adult population. Here we are reporting and for the first time from Sudan and sub-Saharan Africa, a large cohort of pediatric patients diagnosed as PAI including their clinical presentation, the possible etiology and addressing our difficulties in diagnosis and management in countries with limited resources. Up to our knowledge, this is considered as the largest data of PAI in pediatric population from Africa.

Patient & methods: This was a descriptive hospital-based study where all patients diagnosed with PAI between 2006-2020 were reviewed. Diagnosis was based on clinical presentation, low morning cortisol ± high Adrenocorticotropic hormone (ACTH) or inadequate response of cortisol to synacthen stimulation. Etiology of PAI was then classified according to the clinical presentation of the specific diagnosis. Challenges faced in diagnosis and management were identified.

Results: From 422 PAI suspected patients, 309 (73.2%) had CAH and 33 (7.8%) had PAI like symptoms and were not furtherly discussed. Eighty patients (19%) had fulfilled the study criteria: 29 had Allgrove Syndrome (AS), nine Auto-immune Polyendocrinopathy Syndrome (APS), seven Adrenoleukodystrophy (ALD) and one had an adrenal hemorrhage. Hyperpigmentation was the cardinal feature in 75 (93.8%) while adrenal crisis was not uncommon. Forty-two (52.5%) patients had delayed diagnosis and experienced symptoms of PAI for more than 6 months before diagnosis while only 11 patients (13.8%) came to medical attention within one month from the first symptom. Similar number has missed diagnosis at first presentation and misdiagnosed with other common childhood illnesses.

Morning cortisol was found to be low (<6mcg/dl) in 70 patients (87.5%) and ACTH was done for 57 (71.3%) patients and proved to be high (>100 pg/ml) in 54 (94.7%) of them. Hypoglycemia was recorded in 14 patients (34%) out of 41 patients who had their random blood sugar (RBS) checked. Serum sodium (Na) was reported to be low in 42 (59%) out of 71 patients who had their serum Na tested (mean 126± 8 mmol/l), while serum potassium (K) was high in only eight (13.6%) out of 59 patients who had serum K done (mean 6±0.4 mmol/l).
**Conclusion:** PAI is not an uncommon in Sudanese children and many cases are possibly missed because of the non-specific symptoms in addition to lack of awareness and difficult access to tertiary health care facilities. With more public and professionals' awareness as well as securing diagnostic facilities more cases can be diagnosed. Hyperpigmentation, as the most common symptoms at presentation, can be a leading clue to PAI putting in mind other common mimicking conditions. In a country with high consanguinity rate and variable ethnic population, genetic etiology outweighs the acquired causes so further studies with larger numbers and among all ethnic groups are needed. In a resource limited setting, careful clinical evaluation and simple screening test such as morning cortisol could be the best available options for diagnosis. Where hydrocortisone is not available, prednisolone as a cheaper and available alternative may be used. More efforts need to be put to secure treatment facilities.

Factors associated with type I diabetes: a multicentric case control study in Cameroon

Suzanne Sap Ngo Um, Raissa Kapo Ngotty, Mesmin Dehayem, Adele Bodieu, Ritha Mbono, Louise Ejacke, Louis De Djob, Gaelle Tsoli, Paul Koki Ndombo.

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**Background:** Type 1 diabetes mellitus is a chronic condition that falls within the scope of complex diseases because it combines multiple risk factors. In our setting, these factors have not yet been described. Hence, our research topic focuses on factors associated with type 1 diabetes in children, and aims to determine antenatal, perinatal, postnatal factors of type 1 diabetes in Cameroon children and adolescents.

**Patients and methods:** We carried out a multicentric case-control study during 8 months at the mother and child center of the Chantal Biya's foundation, Yaounde central hospital, and Bafoussam regional hospital. Sampling was consecutive and non-exhaustive. Cases were patients living with diabetes, aged 3 to 19 years. Controls were siblings of patients. The Chi square and Fisher’s exact test were used to test the association between 2 quantitative variables. The degree of association was measured by calculating the odds ratio with confidence intervals at 95%. The significance level was set at 5%. We did a multivariate analysis to eliminate confounding factors.
Results: We enrolled 258 children and adolescents: 67 cases and 191 controls. Pregestational diabetes (p=0.01) and maternal obesity (p=0.02) were significantly associated with the occurrence of T1DM. Resuscitation at birth (p=0.01) and cesarean delivery (p=0.01) increased the risk of developing type 1 diabetes. Only 35.8% of case group had received vitamin D supplements against 53.4% of control group. Only 35.8% of case group had received vitamin D supplements against 53.4% of control group. The proportion of children vaccinated against rotavirus was lower in the T1DM group compared to control group (29.8% / 42.4%). The proportion of mixed breastfeeding was higher in the case group than in the control group (67.2% / 40.3%).

Conclusion
The antenatal risk factors found was maternal obesity and pregestational diabetes. The perinatal risk factors was caesarean deliveries and resuscitation at birth. The postnatal risk factors appears to be absence of vitamin D supplementation, mixed feeding and absence of rotavirus immunization.

Assessment of 25-hydroxyvitamin D (25(OH)D), status among children with Sickle cell anaemia and relationship to bone pain crises in Alex Ekwueme Federal University Teaching Hospital Abakaliki, Nigeria.

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3. Dept of Paediatrics Federal Medical Center Asaba, Nigeria
4. Labor Berlin Pediatric Endocrinology newborn screening Charité - University Medicine Berlin Germany

Background
Sickle cell anaemia is a genetic disorder resulting from a mutated form of haemoglobin S. Vitamin D is essential for the healthy mineralisation of bone. Its deficiency causes inadequate deposition of minerals in the bone that can lead to poor bone health. Several studies have reported a significant association between the symptoms of chronic pain seen in sickle cell disease and Vitamin D; however, this relationship has yet to be fully understood.
Objective
This study aims to evaluate the serum Vitamin D, PTH, calcium and phosphate levels among children with sickle cell anaemia in Nigeria. It also seeks any association between these parameters with bone pain crises and anaemia and the influence of age, sex, social class, and ethnicity.

Methods
Patients with sickle cell anaemia were randomly recruited from Alex Ekwueme Federal University Teaching Hospital Abakaliki. The serum indices of Vit D, PTH Ca, and phosphate was analysed at the Labor Berlin Charité-Universitätsmedizin Berlin. Background clinical status and social demographics were assessed by questionnaire and anthropometry obtained. Data were analysed using SPSS version 26.0 for Windows. P < 0.05 was considered statistically significant.

Result
Of the 134 patients studied, 46.3% were female, and the mean age was 9.8 ± 4.5 (1–18). The mean 25(OH) Vit D level was 59.5nmol/L, from which 38 had Vit D deficiency, 74 had Vit D insufficiency, while 22 had normal levels of Vit D. The mean BMI Z score was -1.51SD. There was no association between Vitamin D levels and gender, social class or ethnicity. Low packed cell volume, increased frequency of bone pain crises, lower body mass index, and low parathyroid hormone concentrations were associated with lower 25-hydroxyvitamin D concentrations.

Conclusion
Significant degrees of Vit D insufficiency exists among patients with sickle cell anaemia in Abakaliki. Although no significant correlation in this cohort was seen with bone pain crisis, however, there is a significant association with anaemia. We suggest that routine Vit D supplementation may improve the clinical outcome of patients with sickle cell anaemia.
Adverse Effects of COVID-19 control measures on Type 1 Diabetes Mellitus care: a report of 3 cases.

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Introduction: Coronavirus disease-2019 has disrupted pediatric healthcare. Fear of contracting COVID-19 in a hospital setting, the inability to contact a medical provider for timely evaluation and lock-downs which restricted movement are some factors that hindered optimal care. We describe 2 cases of severe diabetic ketoacidosis in known type 1DM patients as a result of delayed access to free insulin in the hospital and an unfortunate demise of a third child as a result of inability to access optimal care.

Case Presentations:

Case 1: 9 years old male, known TIDM (2 years duration) who presented with fever of two days and fast breathing of 5 hours duration. He had poor drug compliance, ran out of insulin for three days and for fear of COVID 19 presented late to the ER. Examination revealed an ill-looking, dehydrated, febrile child with altered consciousness and tachypnoea. Blood glucose was 393 mg/dl while urine ketones was 3+. He was managed as per ISPAD protocol for severe DKA in the ER and discharged home.

Case 2: 17 year old male with type 1 DM (7 years), indigent but compliant with good follow–up history and on free Insulin by LFAC. There was Covid 19 lockdown before his next appointment. His insulin was available for few more days. Mother called, in panic mode as he lived in a border-town with no transport nor idea about closest pharmacy to procure insulin. Diabetes team was unable to help with movement, no courier service, no ambulance, no transport and inter-border shutdown. He ran out of stock two weeks after lockdown. Mum left home before dawn and trekked many km to be at border and eventually got transport to LUTH for the free insulin.
Case 3: 14-year-old male (8 years duration) with poor metabolic control due to inconsistent use of insulin, poor HBGM and follow up history prior to COVID-19 pandemic. Parents are indigent with low-income jobs and live far in a neighboring state. He was said to have developed DKA during lockdown. Parents were unable to come to LUTH, took child to a nearby facility that couldn’t give the appropriate therapy and he died. Mother only communicated with team after he died.

Conclusion: In managing and making policies during a pandemic, considerations must be given to prevention of unintended consequences on standard paediatric and general health care, which can lead to significant morbidity and mortality.
The Organising Committee
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