



Newsletter

**Focus on WOC (UK)**

**January 2021**

Website WOC: [www.worldorthopaedicconcern.org](http://www.worldorthopaedicconcern.org)

Linked with: [www.worldortho.com](http://www.worldortho.com) (Australasia), [www.wocuk.org](http://www.wocuk.org) (UK)

*This Newsletter is circulated through the internet, through SICOT and all WOC Regional Secretaries in the hope that they will be able to download and distribute it to those “concerned” who may not be connected through the “Net.”*

*It is addressed to all interested in orthopaedic surgery, particularly those who work in areas of the world with great need, and very limited resource.*

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## WOC Newsletter

### From the desk of the Editor

Let me begin by wishing all our readers a very happy new year. 2020 was difficult but it also brought us in contact with our core values. Most of us got a lot of “me time” as well as time to reflect on who we are and what is really important to us. It also gave us an opportunity to understand how little material possessions we really need to live, we realised that is possible to stay and work from home without having to travel all the time.



The environment which was gasping got a chance to recover its breath and animals and birds were able to reclaim space while humans remained indoors. The new year holds the promise of new vaccines, a resurgent economy and perhaps a more environment friendly approach to our lives.

We start with a few announcements. The WOC International Executive Committee met a few times in the interim. There has been a change of guard at the very top and the following new office bearers will take over in September 2020 at the Budapest SICOT Congress :

1. Alaa Ahmad – **President**
2. Arindam Banerjee – **Secretary General**
3. Anil Golhar – **Treasurer**

### **Advisors from different regions of the world**

4. Amjad Hossain, Bangladesh , **South Asia**
5. Kiran Agarwal, Harvard, **North America**
6. Mohammad Fadel, Egypt , **MENA**
7. Monica Nogueira, Brazil , **Latin America**
8. Ram Kewal Shah, Nepal, **SAARC Region**

This team will function for the next 2 years and try to fulfill the humanitarian agenda of the WOC. The important agendas which lie in front of us are clear cut.

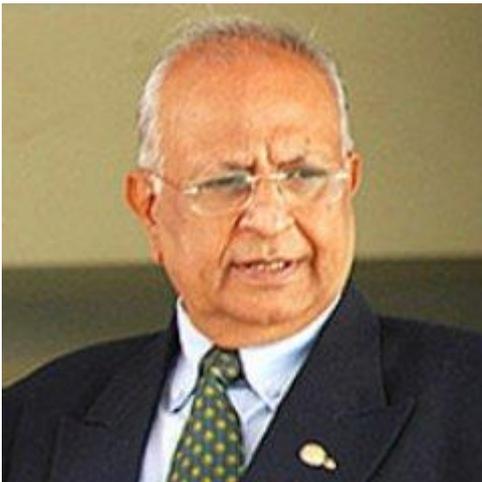
1. Increase and strengthen the National associations and regional chapters of the WOC which represent the core strength of the

organization. The relationship of the Central group and the local chapters need to be clearly demarcated.

2. Have a uniform membership policy across the world
3. Many members are untraceable or have changed their emails. We need to find them and document their presence
4. The mailing lists are incomplete and need to be updated. We also need articles from around the world so that our readers are aware of the activities of the WOC and its members
5. The bank accounts have recently become functional with a great deal of effort. We need to ensure that they remain so.
6. A regular source of funding is required to run the organization
7. We have to think about holding regular conferences for the organization which is independent of SICOT activities and activities of other associated organisations. For this purpose a proposal for a World Congress at Kolkata was mooted but had to be shelved because of the Covid situation. Once the vaccine is in position and it is safe to travel, this proposal should be reconsidered.
8. The constitution has to be modernized. A team has already been selected who will work on it.
9. In the past office bearers were chosen. But as the organization becomes larger with more and member country members a fair way of representation and election has to be formulated
10. WOC has to revive its humanitarian projects from around the world so that it can be a truly “caring” orthopaedic organization.

One of the largest groups which are aligned with the WOC is the WOC(UK). They have round the year activities in various parts of the world as well as their own conferences and meetings. Dr Mike Laurence was very active in the Central organization and kept us well informed about WOC happenings worldwide through this newsletter. In this edition of our newsletter we wish to focus on their work and accomplishments. Drs Alberto Grigori, Deepa Bose, Lawrence Wicks and James Berwin have sent us write ups. Unfortunately some of the files are too large for normal email distribution and a lot of great photographs had to be left out.

## **From the desk of the President**



The year 2020 stopped all activities. Now we are in 2021. At the outset accept my good wishes for the New Year. May you maintain good health and may it bring prosperity and happiness.

We are on the move. The Jordan chapter has been formed and now the Libya chapter is also going to be started. Our constitution demands that each chapter should have their own constitution and get it registered in their country. They can open their account. They can enroll members and the membership fee which should be life membership needs to be approved by WOC international.

In February we are going to have a post graduate instructional course in collaboration with Orthopaedic Research and Education Foundation-India, Orthopaedic association of SAARC countries, Indian Orthopaedic Association, Centre for Science and Society and National board of Examinations. This course will be open to all Post Graduates students of SAARC , Middle east and African countries. Please pass on the information to all concern. The details will follow soon.

Plan some community service in your backward areas. Try arrange some funds so that you may provide Orthosis and Prosthesis to the needy. You can hold basic courses like OT Technician courses, Ponseti workshop etc. Identify their needs and act accordingly. Don't forget to send your report along with pictures to the editor.

We will shortly be sending out requests to our previous TKS medalists to submit a report on their achievements and projects. This request will also be sent to the previous volunteers and members of WOC who will be requested to highlight their services to the community. These will be printed in our subsequent newsletters.

Keep smiling

Best wishes

Deven Taneja

## **The Secretary-General's Report**



WOC international is beginning the new year with great enthusiasm to develop the WOC international performance and solidify its internal situation after the decisions took in the Dec 13<sup>th</sup> meeting of the EC in the presence of the SICOT president where the results of the Sept elections confirmed with blessings to the new EC members, as well as emphasis on amending the WOC international constitution before the SICOT 2021 annual meeting in line with the development and growth of the organization.

With the growth of the organization activities, the WOC international president ordered for a monthly meeting of the EC (acting and elected ones) to be held through Zoom to discuss the updates of the organization.

We had an official letter from WOC Libya chapter that was created in Dec 2020 to be part of the WOC international chapters with an MOU that was agreed upon.

This is welcomed by the WOC international president and secretary general looking forward to implement orthopedic programs related to the priorities the Libya chapter is addressing.

We also have other 3 programs that hopefully will succeed soon to approve through an official MOU under the umbrella of WOC international.

## **FOCUS on WOC (UK).**



**BONES** (Bahir Dar Orthopaedic Network and Exchange with Severn Deanery)

**James Berwin** (ST7, Severn Deanery and co-founder of BONES)

Bahir Dar is a small city 600km north of Addis, in the north west of Ethiopia and is the capitol of the Amhara region. It has a regional hospital but opened a new University hospital with linked medical school, labs, library and accommodation in September 2019. Whilst the town itself has a population of around 650, 0000, this hospital serves as the only centre for a population of approximately 16 million from the wider Amhara region. The BONES project was founded in October 2019 and so is still in its fledgling stages.

In the last year we have made a total of four trips to Bahir Dar. Two initial acquaint visits which led to our signing a Memorandum of Understanding (MOU) and two further trips to deliver on our promise of providing regular post-graduate orthopaedic teaching and training. This included the delivery of a highly successful Primary Trauma Care (PTC) course, followed by a Paediatric flexible IM nailing course as well as a visit by Virti, a virtual reality (VR) platform designed for use in the sphere of medical education. More on this later.

The COVID-19 pandemic has undoubtedly had a devastating effect on global surgical efforts. Two trips were planned as part of the BONES initiative in spring of this year. The second trip, planned for the end of March 2020, would have seen two consultants and two registrars from Severn Deanery invited as faculty for an AO trauma course in Addis Ababa, teaching orthopaedic residents from around the country including Bahir Dar. Sadly, this has been postponed until further notice.

I'm delighted to report however, that one team made it there and back again before the pandemic took hold. The trip was paediatric themed and led by Mr Simon Thomas (Paediatric Orthopaedic Consultant and TPD for Severn Deanery), joined by two of our registrars and a representative from the Virti 360 virtual reality videoing team which sparked much interest amongst the local trainees.

I would also like to take the opportunity to thank Mr David Woods (Great Western Hospital) for so generously donating a C-arm, including maintenance package and lead jackets, to the cause. My understanding is that it is waiting in a container and is ready to be shipped. This will undoubtedly make a huge difference to their capacity to deal with the complex injuries they see on a daily basis.

Whilst trips to Bahir Dar are currently on hold, we are still accepting notices of interest from registrars and consultants around the region with the idea of lining up a number of trips for when it becomes safer to travel. For this years BONES report, I have asked Thomas Knapper and Alex Aquilina, the two registrars who returned from their trip in March 2020, to write about their experiences.

### **Trip Report by Thomas Knapper (ST7), Severn Deanery**

The partnership with Bahir Dar focuses on education and fostering a supportive network. With each trip we aim to take some basic equipment and teaching aids out with us for the hospital and trainees. Therefore with bags packed with saw bones, nails, hammers and the critical customs forms we flew from Heathrow to Bahir dar via Addis Abba. Upon arrival on a nice sunny day we received the usual warm welcome from Bini, Bini and Bekalu at the airport before a short transfer to our hotel.

The following day we visited the University hospital site to deliver equipment and take a tour of hospital. A large complex on the outskirts of town, Tibebe Ghion is the University hospital of Bahir Dar. Externally the main hospital building is complete and internally the hospital is up and running with busy outpatients, filled wards and enough trauma on a daily take to cover most of the Orthobullets trauma section in a single trip. The site is constantly developing and evolving with a library, medical school and accommodation all near completion. Despite having access to nearly all the investigations that we are accustomed to back home (bloods, radiographs, CT, MRI) the contrast to our university hospitals is stark. Procurement of new equipment appears to be a logistic nightmare therefore any spare kit or resources are extremely well received.

Although the trip was short the experience and exposure was abundant. The week consisted of the daily trauma meetings of the preceding 24 hour take, a paediatric trauma ward round, clinics, theatre and teaching. Trauma is plentiful in Bahir Dar and most is complex owing either to the mechanism of injury; falls from scaffolding, RTC, snake bites rural shootings or stick beatings or to delayed presentation following visits to the local bone setter. Management is familiar but adapted to the local resources available.

Clinics were especially useful as an insight into the differences in pace, patient-doctor interactions and the pathology seen. In a single morning we saw synostoses, skeletal dysplasias, congenital patella dislocations, numerous chronic osteomyelitis, pathological fractures and post traumatic growth disturbances. I think the variety, although not unexpected, had a lot to do with the effort the attending and residents had gone to organise a list of patients with either interesting pathology or complex cases for second opinions.

As part of the alliance the key focus is on education and supporting healthcare development. The practical focus on this trip was paediatric TENS nailing. For this we ran a sawbone workshop for all the residents covering both upper limb and lower limb fracture patterns, The main challenge was remembering to adapt the technique to performing without image intensifier guidance. This however was very well received and we hope that this will be a practice adopted locally in the not too distant future.

And finally one of the highlights of the trip was the socialising with the Doctors and sightseeing. We were treated to an evening in the local cultural hall where we were encouraged to dance and rehydrate on the local drink; Tej - a honey wine home-brew of unknown strength. On the final day we took time to visit the Blue Nile falls. Accompanied by Wubshat and David two of the senior residents. After a bumpy journey down a dirt road we arrived at a bustling village and the start of the hike to the Blue Nile falls. This is the key 'must see' in the vicinity of Bahir Dar and despite David telling us that we had come in the "wrong season and they are usually more impressive" they were still a highlight and highly recommended day out.

I would recommend a visit to any trainee and trainer it gives you a valuable insight into different training, healthcare systems and challenges and there is as much that they can teach us as we can teach them.



## **Bahir Dar Virtual Reality Feasibility Report.**

**Alex Aquilina** (ST4, Severn Deanery) **and Nils Hellberg** (Virti)

### *Background*

The World Health Organisation (WHO) recognises a global health workforce crisis with a need for a scale-up of health professional education. The WHO 'Safe Surgery Saves Lives' campaign highlights a continuing need to improve education in resource-poor healthcare systems.

Simulation training is a staple part of medical training in the NHS with well-recognised patient safety benefits. Simulation facilities are expensive and difficult to access in resource-poor healthcare systems. Smartphone ownership and internet access are growing in Africa.

Recent technological advances make it possible to deliver immersive Virtual Reality (VR) simulation educational experiences directly to users' smartphones requiring only an internet connection. VR-simulation training delivered via smartphones in resource-poor healthcare systems provides a novel and exciting opportunity to provide simulation in a cost-effective and scalable way over large geographical healthcare networks.

For this visit to Bahir Dar, I have partnered with Virti, a company that specialises in making experiential education affordable and accessible for everyone <https://virticom.com>. Virti has created an online platform that delivers virtual and augmented reality coupled with state-of-the-art artificial intelligence programming via an app to transport users into difficult to access environments. Virti have agreed to collaborate on this project. The links already established by BONES provided the perfect opportunity to test the feasibility of using the Virti platform in a resource-poor healthcare system.

During an Ethiopia to the UK visit in November 2019 facilitated by James and the BONES team we were able to demonstrate the Virti platform and a 360-degree camera to Dr Biniyam Biresaw and Bekalu Wubshet from Bahirdar University Tibebe Ghion Specialised Hospital. Bini and Bekalu were impressed by the technology and felt that it has the potential to improve resident and medical student training in Ethiopia. A joint application to the University of Oxford Africa Oxford Initiative was successful in providing funding for the trip and equipment.

### *Trip Aims*

1. Assess the feasibility of delivering and developing VR-simulation training via smartphones in Bahir Dar

2. Demonstrate the Virti platform, creation, editing and upload of 360-degree videos to Orthopaedic Residents
3. Collect feedback from residents on their experience using and accessing demo VR-simulation training videos and ideas for future work

Nils Hellberg, Chief Technical Officer for Virti and I joined Mr Simon Thomas (Severn TPD) and Mr Thomas Knapper (Severn Trainee) for a three-day visit to Bahirdar University Tibebe Ghion Specialised Hospital. We wanted to assess the feasibility of both using the Virti platform to deliver VR based simulation teaching to orthopaedic residents on their smartphones, and also the creation of 360-degree video content on the ground; including video editing using local IT infrastructure and upload of edited content to the Virti platform.

On the morning of the first day, Nils and I partnered with Dawit, an intern and Wubshet, a senior resident. Dawit and Wubshet were assigned to look after us throughout our visit and partner in the project. Throughout our stay, we demonstrated how to use the camera and equipment, undertake video editing, stitching of 360-degree video content and upload of stitched material to the Virti platform; in the hope that they could continue to develop and deliver VR teaching content in the future. With Dawit and Wubshet's help, we created a University and Hospital tour in VR by capturing a series of concise 360-degree videos (5-30 seconds long) of the key areas of the site using an Insta360 One X camera on a Tripod. Following video editing, we were successful in uploading the video files (5-40 MB in size) to the Virti platform. The fastest and most reliable internet connection we could find was off of the hotel WIFI. The Jacaranda hotel has an excellent reputation for its internet connection which makes it popular among locals and visitors. To complete the cycle, we were able to download the newly uploaded hospital tour to a pair of Oculus Go VR headsets and demonstrate the tour back to the department later in the week. In the afternoon we filmed Tom and Simon's sawbone teaching sessions with the intention of being able to use the video footage to pilot delivering sawbone teaching in VR at Barhir Dar in the future using the Virti platform.



On the second day, we filmed Bini in the operating theatre undertaking a debridement of sequestrum on a child in 360-degrees using a head mount in the morning and Mr Thomas running a teaching clinic in the afternoon. The clinic provided a suburb opportunity to film a series of unusual short teaching cases and document the discussion over the management plan between the local and Bristol team.





Throughout our visit, Dawit and Wubshet posted instructions on the resident Telegram messaging app group on how to download the Virti app and access the demo VR content. We asked the residents to download three simulation videos; an introduction to the c-arm image intensifier, a demonstration of a WHO checklist and application of a VAC dressing. On our last day in the hospital following resident teaching, Nils and I demonstrated the Virti platform to 14 of the residents. We showed simulation videos of a hip examination and an application of a VAC dressing using two Oculus Go headsets and the resident's smartphones placed in VR headset glasses. We then collected feedback and undertook a focus group with a small group of five residents.

### *Findings*

We found that it is feasible to deliver and create VR teaching content in Barhir Dar, Ethiopia, where access to the internet is possible. All 14 residents at Barhir Dar surveyed owned a smartphone device capable of downloading the Virti app and running the simulation videos in VR when using the VR headset glasses. The one caveat was that consistent downloading and uploading of video and app content was challenging due to poor internet connection speeds, dropouts and reliability on both cable and mobile internet. Of the 14 residents surveyed the average reported download and upload speed from either a wired internet connection provided via WIFI or from the local 3G network was less than 2MB/s. Only one resident was able to download all three demonstration simulation videos, and an additional two residents were able to download one or more of the videos during our visit. We believe that the main issue with downloading of VR videos from the Virti app was firstly due to the relatively large size of the video files and a combination of slow and unreliable internet connections. However, all 14 residents watched the hip examination and VAC application demonstration

videos on the final day. Feedback was very positive; all residents enjoyed using the Virti app, felt they would benefit from further training using the app and would like VR simulation to become a core part of training in the future.



### *Future work*

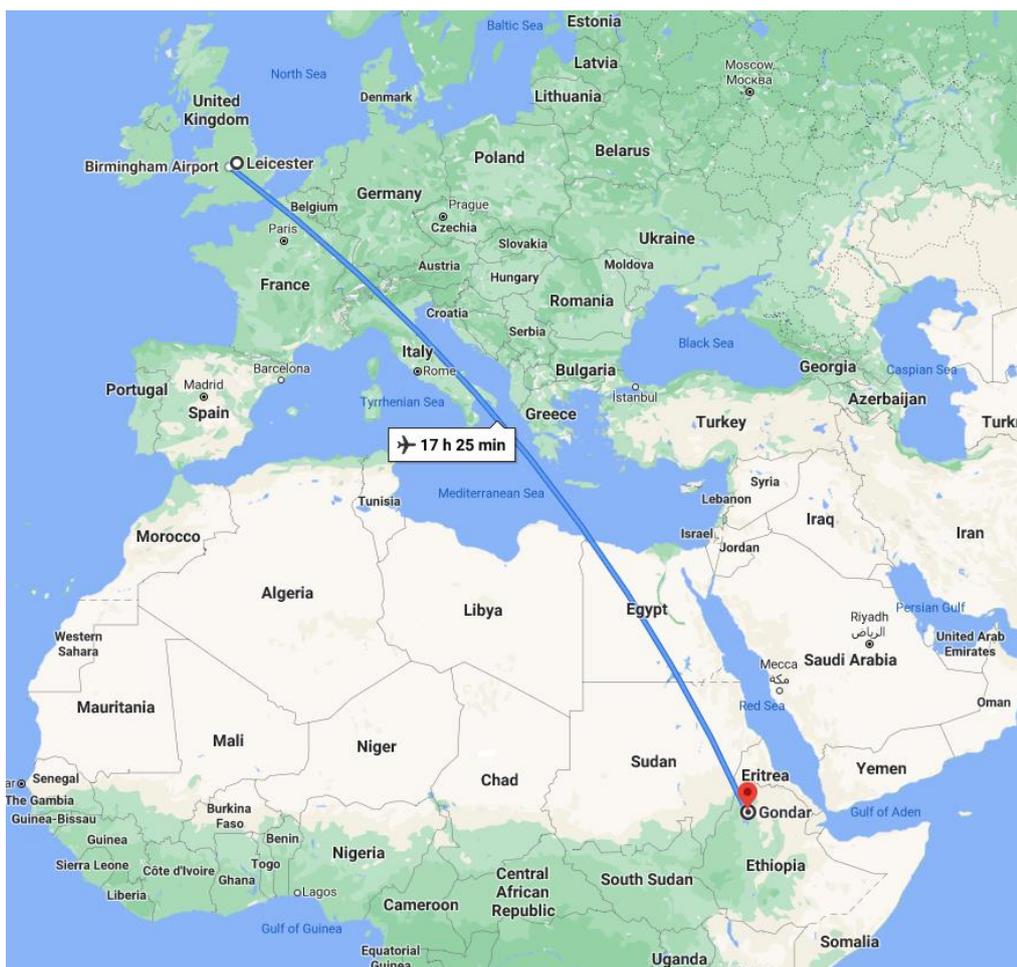
The Af-Ox Travel Grant enabled us to leave a 360-degree camera and equipment in the care of the Barhir Dar orthopaedic department. Dawit and Wubshet will continue to work with us to develop and share VR content in the future. We also purchased two Oculus Go headsets that will be loaded up with VR teaching content and sent to Barhir Dar enabling the department to continue to deliver VR simulations both to residents and medical students in the short term. During our visit, we could see that the necessary infrastructure was being built and installed to provide a high-speed internet connection within the university building. When this is in operation, it will enable us to overcome many of the issues encountered when downloading and uploading video files.

### *Declarations*

I would like to thank BONES for making the necessary introductions and for facilitating our trip. This project would not have been possible without the kind support provided by the Barhir Dar Orthopaedic department and for Dawit and Wubshet for looking after us during our visit. Finally, I would like to acknowledge and thank the University of Oxford Africa Oxford Initiative for providing the funding to make this trip possible and to allow us to gift 360-degree video equipment to the team on our departure.

## Trip to Ethiopia

In 2014, having won a Travel Bursary, an orthopaedic registrar from Leicester, Laurence Wicks visited the University of Gondar Hospital (UoGH), Northern Ethiopia. Gondar is a hilly city on the edges of the picturesque Simian Mountain range. The hospital dates back to the Italian occupation in the 1930s with the first batch of medics graduating in 1979. It serves the city and neighbouring rural areas of the state of Amhara. Its total catchment population is approximately 3 million people, for whom this is the nearest hospital with medical staff and facilities.



There is a huge burden of trauma in Ethiopia due to poor road safety and employment being mainly manual or agricultural. There are also many ballistic injuries due to the surplus of weapons left over from the Civil wars of the 1970s and 1980s.

Until very recently, there have been very few orthopaedic specialists in Ethiopia. There are currently 5 training programmes for registrars. This, to provide service for a population of 90 million! So, a large proportion of trauma care was and is still carried out by non-orthopaedic (General) surgeons. In addition, facilities were very basic with a small selection of orthopaedic implants, totally inadequate to manage the workload of cases in Gondar.

Following Laurence's visits, a few further visits followed by Mr Alwyn Abraham, Mr Chris Kershaw, Mr Dean Birch and others. This further strengthened ties between the orthopaedic department in Leicester and UoGH.



## **Postgraduate orthopaedic curriculum development in Guyana**

Guyana is a small country situated on the northern coast of South America. It was a British colony until 1966, and is the only English-speaking country in the continent. Culturally and historically it has more in common with the West Indies, and is a member of the Caribbean Community (Caricom). It has a population of approximately 780,000, mostly concentrated along the coast, although there are settlements in the “interior” of the country, linked to mining and forestry. It is often referred to as the Land of Six Peoples because of the diverse ethnicity of its population; Europeans (mostly British), Africans, Indians, Chinese, descendants of Portuguese indentured labourers and native Amerindians. The word Guyana is derived from an Amerindian word meaning “land of many waters”.

Guyana currently has approximately 2.1 doctors per 10,000 people (compared to 2.8 per 1,000 people in the UK). Prior to the establishment of the School of Medicine in the University of Guyana in 1985, Guyanese who wished to study medicine did so abroad, in countries such as the UK, India, the Soviet Union and Cuba. The Guyana Public Hospital Corporation (GHPC), the large referral and teaching hospital in Georgetown, established a two year Diploma programme in Orthopaedics & Traumatology in 2009. Whilst this was a huge step forward, the specialists it produced were not necessarily prepared for independent practice without further training. Despite this, the programme was quite successful, producing ten graduates who are still working in the specialty in Guyana.

I proposed to the (now defunct) British Orthopaedic Association Training Standards Committee that we could use the UK Trauma & Orthopaedic Curriculum as a template for developing a four year Masters in Orthopaedics and Traumatology programme, as requested by the local surgeons. Professor Philip Turner, past president of the BOA, kindly agreed to this. The current British curriculum was duly adapted to suit Guyanese requirements. In this endeavour I received enormous help from Dr Khan, a senior orthopaedic surgeon at GPHC, and Lisa Hadfield-Law, educational advisor to the BOA. The new curriculum was accepted by the University of Guyana in 2018.

Seven residents have been admitted to the programme since then, and currently there are four in the first year, two in the second and one in the third year of training.

We continue to face challenges in implementing the new curriculum, as is to be expected. The new ways of supervision and assessment are strange and unfamiliar, and are not yet fully understood or accepted by residents or faculty.

Faculty development is also an important area to focus on when introducing a new curriculum. There are only a few senior surgeons at GPHC, who are all dedicated to the development of an excellent programme, and who are very forward thinking in their approach. However they already have very busy clinical commitments. Their workload has suddenly increased exponentially with the start of the Masters programme.

Nonetheless we persevere, in the hope and expectation that this new curriculum will improve patient care and academic practice in Guyana.

Members of WOC(UK) who coordinated and sent us articles.



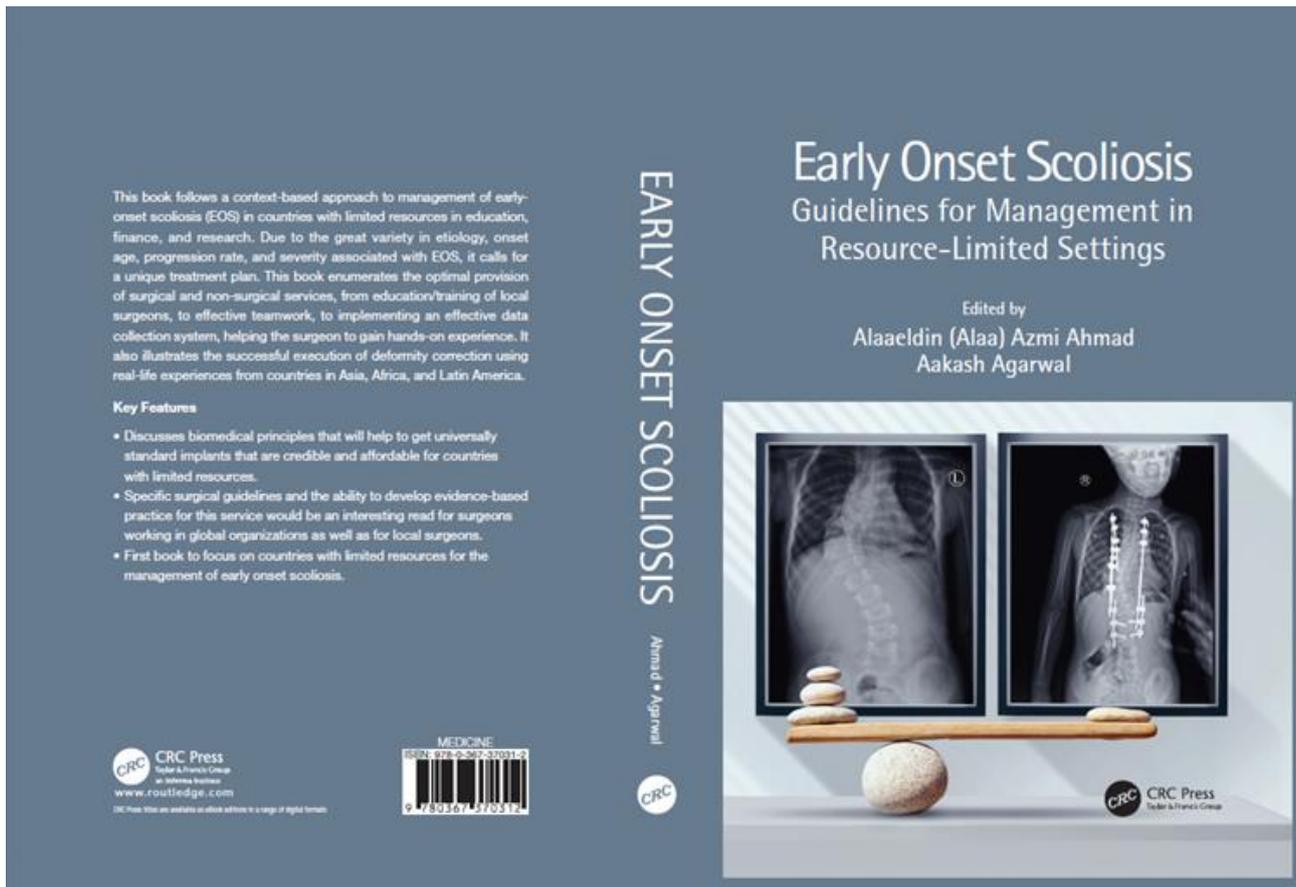
Deepa Bose, Birmingham, UK



Alberto Grigori, UK

One or two more articles are still with us and will be published in the next newsletter

## New book published



Author – Alaaeldin (Alaa) Azmi Ahmad MD  
Professor, Pediatric Orthopedic Surgery  
Co-author – Aakash Agarwal  
Assistant professor - Biomedical Engineer PhD

the science of early-onset scoliosis management has been centered on case studies in advanced economies and has largely sidestepped the particular issues of regions with limited resources, where many, if not most, children with EOS cannot access treatment due to lack of experts and weak organizational frameworks. This book is a humble effort to provide guidelines to implement this

important service within a limited resource setting, by highlighting realistic on-the-ground experiences of pioneer spine surgeons from developing and developed countries who succeeded in establishing EOS programs that not only serve patients directly but also educate young spine surgeons and promote EOS research in developing countries.

The book is not meant to provide formulaic solutions for all problems related to the spine in regions with limited resources, but to draw attention to the particular problems facing developing countries in this regard and to provide rough roadmaps based on previous successful experiences for interested actors. It is meant to promote an understanding of the clinical, educational, and organizational problems for the surgeons, global organizations, and local governments dealing with pediatric spine deformity in limited resource regions, as well as an appreciation for the importance of context-based solutions to these problems.



**25<sup>th</sup> International Post Graduate  
Instructional Course  
on Zoom**

**organized by : OREF , India under aegis of WOC, OASAC,  
IOA and Buti Foundation  
26<sup>th</sup> to 28<sup>th</sup> February, 2021**

**Eligibility – Students pursuing  
MS, DNB, FRCS & FCPS Degrees**

**Course Director – Dr. Deven Taneja, MBBS, Dorth, MS orth, FAMS, FRCS(Eng.), FIOA**

**Faculty : International**  
For details contact email id – [pgcourse@gmail.com](mailto:pgcourse@gmail.com)

Finally....

We wish you a very happy 2021. Please get vaccinated as soon as possible. May you and your loved ones remain active, safe and happy.