

Invited Perspective

2022 POSNA/EPOS Traveling Fellowship Experience

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Introduction

Each year, POSNA partners with an international pediatric orthopaedic society to sponsor three practicing pediatric orthopaedic surgeons to travel to host cities to exchange clinical and research ideas as well as build lasting bonds and friendships. We were honored to be notified in the winter of 2019 that we were selected for the 2020 POSNA/EPOS Traveling Fellowship and extremely grateful that after a delay in the COVID-19 pandemic, we were able to travel in the spring of 2022. Fellows included Drs. Jaime Denning of Cincinnati Children's Hospital, Maryse Bouchard from The Hospital for Sick Children in Toronto, and Jennifer Bauer from Seattle Children's Hospital. In gratitude to POSNA, we are sharing what we learned and the highlights of our fellowship.

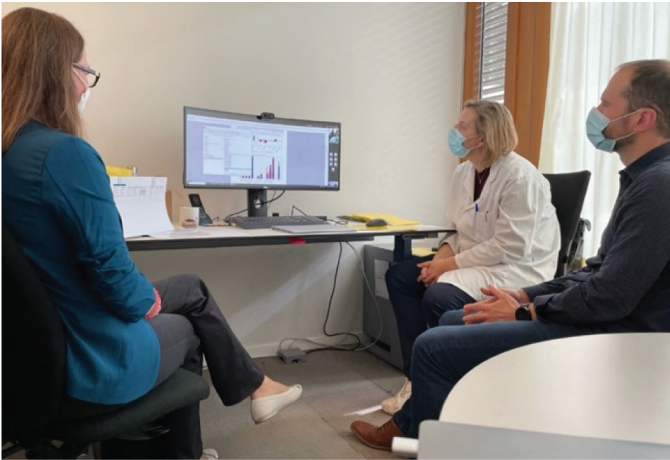
Basel, Switzerland: University Children's Hospital Basel

The traveling fellowship began in Basel, Switzerland. Our host, Dr. Elke Viehweger (and Basel surgeons

Drs. Carol Hasler and Daniel Studer), capitalized on the unseasonably warm weather by whisking us up Mt. Pilatus via cable car with stunning vistas on all sides. We had a traditional Swiss lunch of cheese fondue with bread and potatoes and champagne.



Drs. Denning, Bouchard, and Bauer atop Mt. Pilatus.



During the virtual gait lab meeting, Dr. Viehweger was a master educator, providing insight into complex gait analyses all while providing constructive feedback to her team running the meeting and striving for constant improvement.

We later took a walking tour of Basel with Dr. Viehweger, where throngs of piccolos and drums marched the streets in a traditional post-Carnivale celebration (until late in the night)! Each of our next 2 days in the hospital began with early morning workouts led by Drs. Hasler and Manuel Kraus along the Rhine River. On the first day, we heard from each University Children's Hospital Basel (UKBB) team member about their fascinating and impressive research. We had the opportunity to participate in the motion analysis meeting and tour the gait lab or scrub into spine surgery and watch spondylolysis torso

casting. The gait group was also able to take a quick ferry across the Rhine River with Dr. Andy Krieg before we all gave presentations to the group, followed by dinner with several Basel surgeons.

Our final day at UKBB was spent in the OR watching a neuromuscular hip and CP equinus correction with Dr. Viehweger. Our social program finished the day with an impressive trifecta of a private Georgia O'Keeffe exhibit tour, rooftop VIP lounge aperitifs, and an orthopaedic family dinner at Restaurant Donati.

Orthopaedic Highlights

- We were extremely impressed with the breadth and quality of research being conducted at UKBB. We were lucky to hear each team discuss their specialty research, including assessing the stiffness of individual spine motion segments with programmable mini-hexapod devices and engineering nasal cartilage to repair osteoarthritic joints.
- The spine cases were dual-surgeon scrubbed. In the neuromuscular cases, Dr. Viehweger's teaching approach was surprisingly similar to North American training, allowing a great deal of independence with constructive guidance along the way.
- We were lucky to observe a neuromuscular equinus foot correction with tibialis anterior shortening after



Dinner at Restaurant Bohemia.



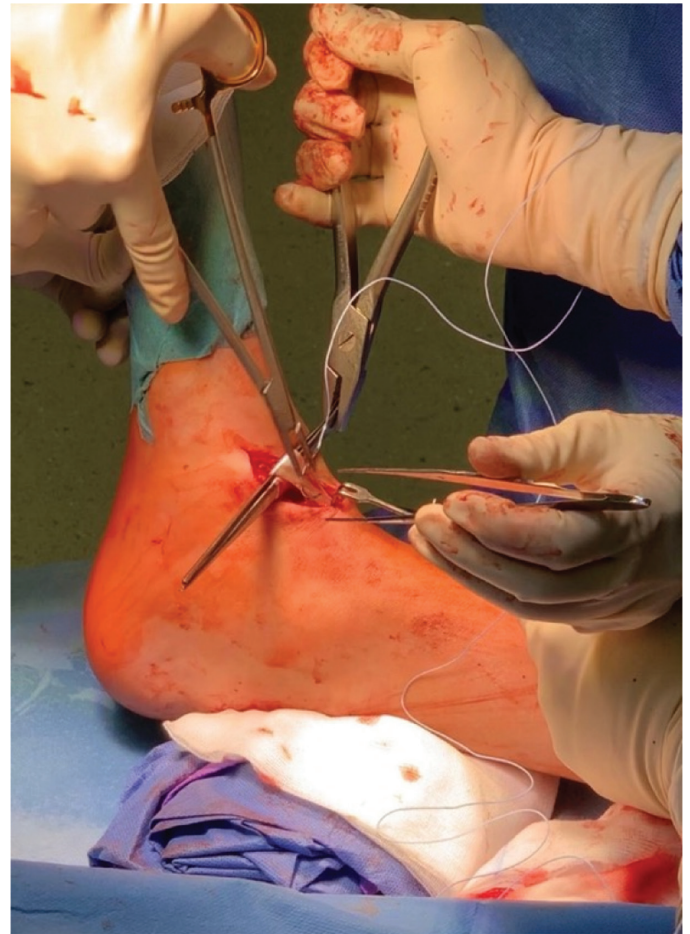
Dr. Viehweger (holding suction) takes trainees—an all-female OR on this day—through a neuromuscular hip case.

hearing about the procedure during the gait analysis meeting.

- The complexity and breadth of cases were a highlight, from spine fusions to a FITBONE revision case.

Cultural Highlights

- We enjoyed both the amazing natural beauty of Mt. Pilatus and the traditional fondue meal atop the mountain.
- Our inclusion in the physical fitness routine of Dr. Hasler (and the rest of the team) was unparalleled at any other site on our traveling fellowship.
- We learned about the tradition of piccolos and drums performing in the streets of Basel on Sundays between Carnivale and Easter, and we were lucky enough to walk among the processions.



Intraoperative photo of tibialis anterior tendon shortening technique.



View from the gondola while ascending Mt. Pilatus in Lucerne, Switzerland.



Drs. Denning, Bauer, and Bouchard's personal trainer, Julian Hirano, put them through a HIIT workout by the Rhine River before the sun came up.

- We were taught about the American artist Georgia O'Keeffe by the Swiss, but what we lacked in historical knowledge of the artist was made up for in our painting interpretations.

- The rooftop Bar Rouge afforded views of all three countries (Switzerland, France, and Germany) that converge at the Rhine River where Basel is located.

Coimbra, Portugal: Hospital Pediátrico

We managed to bring the sunshine from Basel to Coimbra. This section of the trip was particularly special for Dr. Bouchard, as the local host was her fellow at Sick Kids when she was a PGY-3 resident.



The city of Coimbra with the University atop the hill.



The group of surgeons with Georgia O'Keeffe's Pelvis painting in the background at the Fondation Beyeler.

Our host, Dr. Cristina Alves, met us at the Hotel Quinta Das Lagrimas, steeped in historical lore and surrounded by centuries-old gardens. We initiated the stay with a sparkling wine toast for Dr. Denning’s birthday, then a lovely walk through the lower city that ended with faculty joining us for a welcome dinner of traditional Coimbra foods such as Rabacal cheese. The next 2 days we spent in the Pediatric University Hospital in clinics and ORs with the team of pediatric orthopaedic consultants, residents, and nurses. On the first day, we also gave presentations, but the highlight was a series of complex case discussions presented by the residents. In addition to showing us around the historic university campus and botanical gardens, the residents also hosted us for a dinner of Portuguese tapas and a country-wide wine tour. This was hands down the most fun and lively dinner we had and the most engaging group of residents we met. On our last day in Portugal, Dr. Alves invited us to Porto.

Orthopaedic Highlights

- We were impressed that the faculty and resident body were predominately female, and we were able to watch a Salter osteotomy with Drs. Alves and Ines Balaco in an all-women OR, save the one male nurse. It was also special for Dr. Bouchard to see Dr. Alves operate—it was like watching her mentor Dr. John Wedge in the flesh!



Hotel Quinta Das Lagrimas.



Dr. Denning’s birthday toast in the Hotel Quinta Das Lagrimas courtyard.



All-women OR. Back row, left to right: Residents Carla and Sonia, Dr. Balaco. Front row: Dr. Alves.

- The spine surgeons in this department are pediatric orthopaedists as with Basel’s surgeons. We were invited to watch surgeries including both MAGEC and Apifix implants.
- Dr. Joao Cabral invited us to join him during an arthroscopic resection of a subtalar coalition. The



Intra-operative x-ray from left Salter Osteotomy.



From left to right: Sonia (resident), Dr. Bouchard, Rita (resident), Drs. Cabral, Denning, and Alves.

x-ray setup and approach provided us with tips to adopt at home.

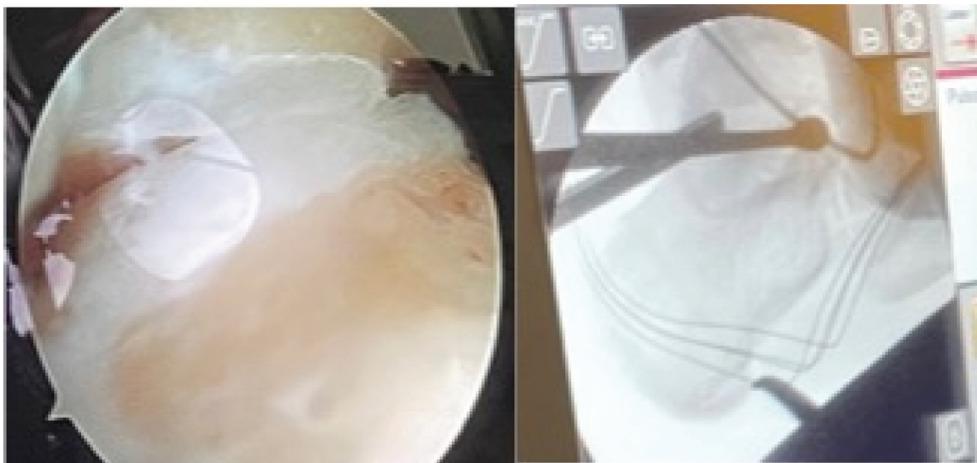
- The complexity of cases seen at the Hospital Pediátrico is impressive. It was readily obvious that the faculty here are dedicated to training the residents and ensuring they have a broad pediatric orthopaedic experience.

Cultural Highlights

- There was never a missed moment to introduce us to local foods and wines! Most notably, on our last day in the hospital, they organized a lunch of traditional suckling pig and its accoutrements. It is unlikely



On the last day in the hospital, the fellows enjoyed a lunch of traditional suckling pig.



Intra-operative arthroscopic and radiographic images from subtalar coalition resection.

any of us will ever eat so well at work again in our careers. Rooftop gin and tonics with some of the residents were a great conclusion to the day!

- We were so fortunate to be invited to a special dinner performance of traditional Coimbra Fado music. We were also lucky that the father of one of our hosts Dr. Oliana Tarquini, was also present and sang one song with the band.



The fellows experienced a special dinner performance of traditional Coimbra Fado music.

- Our hosts were devoted tour guides. We explored the campus of the University of Coimbra. It was established in 1537 and is a UNESCO World Heritage Site. We also learned of their traditional dress of capes and ties with colors specific to each faculty that later inspired the themes for Harry Potter.

Porto

We arrived in Porto in the late afternoon and met Dr. Alves for a Tuk Tuk tour of the city. This couldn't have been a more efficient and exhilarating way to see the city! We took steep narrow roads and navigated traffic and pedestrians to see all the sights. We learned about the port industry, learning that the right side of the Douro River was for catching rays and enjoying sunset views as we were kept laughing by Pedro our driver. We concluded the evening with a walk along the river, a glass of port followed by a fantastic dinner at Taylor

Fladgate Cellars. The following morning, we left for Aarhus.



Drs. Bauer, Bouchard, and Denning enjoy the sights by Tuk Tuk.



Dr. Alves with Drs. Bauer, Bouchard, and Denning in Porto, on the perfect last day of their visit to Portugal.

Aarhus City, Denmark

We were met at Billund Airport by our host, Dr. Martin Gottliebse, for the last country of our trip. Dr. Gottliebse was amazingly also serving as the EPOS local host starting just 2 days later. He and his team at Aarhus University Hospital (AUH) provided a very warm welcome in a local restaurant to overcome the cold Danish rain. The pediatric orthopaedic surgeons at AUH are embedded within the orthopaedic department, working closely with the adult surgeons, in clinics and operating rooms spread throughout the sprawling

campus. The campus was built horizontally, flanked by two elevated helipads, and is so large that most workers use bikes and scooters to get around *indoors*. On our first day in the hospital, we toured the campus, scrubbed into the ORs, and presented talks. We also met with the hospital leadership team in charge of creating



Dr. Gottliebsen was the host in Denmark.



The sprawling Aarhus University Hospital Campus.

a stand-alone pediatric center on the campus to share our experiences from large North American pediatric hospitals. It was an honor to be asked to participate in helping to shape their future plans, and we plan to remain connected as they move further along in the process. We had a driving tour of the city and waterfront and shared a traditional Danish set-menu meal with the department that evening. The second day we spent in the OR before traveling by train to Copenhagen to attend EPOS.

Orthopaedic Highlights

- The Danes have access to an extensive national orthopaedic database, which supports a number of studies. Moreover, the surgeons have direct access to the data. This is a wonderful opportunity for potential international collaborations.
- The adult spine surgeons manage the pediatric spine surgery and Dr. Ebbe Hansen welcomed us scrubbing into a lumbopelvic fusion with L5 posterior hemivertebra resection. The ORs were very large by any North American standard, with a wall of windows.
- After a tour of the pediatric ward, which was appropriately stocked with Lego play areas, and the spacious outpatient clinic with Drs. Gottliebsen and Mathias Bungler, we attended a flatfoot reconstruction with Dr. Michael Davidsen.
- AUH Orthopaedics has extensive experience with hip preservation surgery, including outcome research with the national database. Dr. Stig Storgaard Jakobsen welcomed us to scrub with him where we all agreed that we had not seen a more efficiently performed peri-acetabular osteotomy. He was assisted by a robotic leg positioner and sterile surgeon-controlled fluoroscopy capabilities. He completed three PAOs that day with techniques we will bring back to our institutions.

Cultural Highlights

AUH has the most comfortable OR attire and impressive uniform setup complete with hospital-issued socks.



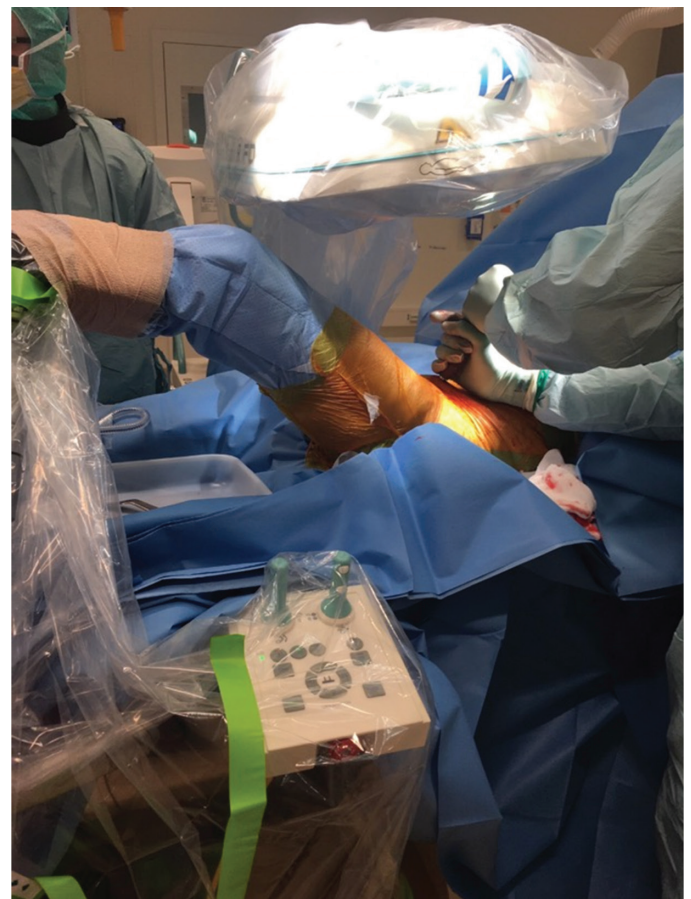
Traditional (fine-dining) Danish dinner with fellows and faculty.



A look inside an Aarhus OR.

These are made in-house and we regretfully did not take any scrub stowaways with us in hopes we will be invited back; however, we recommend them as prototypes to those looking to get into the business.

- We went out each night with Martin and his partners into the Latin quarter with quaint, rain-stained cobblestone streets to eat traditional Danish meals, including the local beers: Tuborg and Carlsberg.



Robotic leg positioning and surgeon-controlled fluoroscopy.



Scrub room for AUH.



Aarhus City Latin quarter.

Copenhagen, Denmark: EPOS and Riggshospitalet

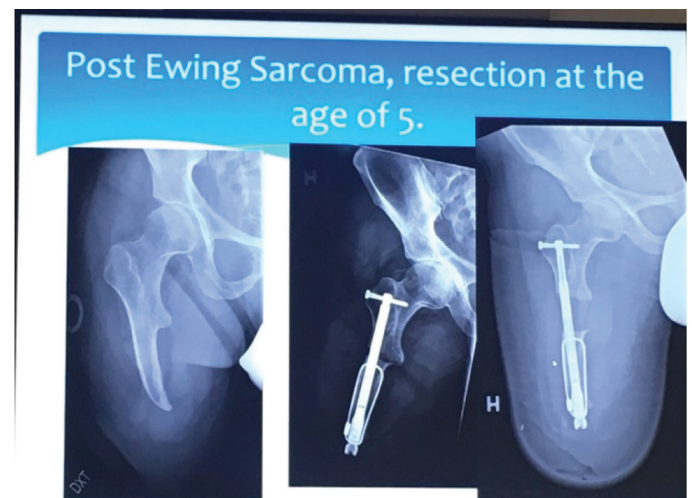
After a few canceled trains, we made our way from AUH OR straight down to Copenhagen in time to be invited

guests at the EPOS Presidential Dinner to begin our 5-day stay. We were immediately comforted by seeing our three European hosts at dinner, who provided many new EPOS introductions for us. By now, we were pros at the traditional Danish dinner that was served and could provide explanations to our table.

Before the official afternoon EPOS start, we made one last hospital visit. Dr. Marie Fridberg hosted us for the morning at Riggshospitalet, the main university hospital in Copenhagen. The pediatric group here was also embedded within the adult department though a stand-alone pediatric hospital will be completed in a few years. We toured the hospital, dodging snowflakes between buildings, where we saw advanced trauma bays with CTs inside and an impressive physical therapy center. We also listened to a trauma conference, radiology conference, and case presentations.

Orthopaedic Highlights

- Dr. Tobias Nygaard has an impressive limb reconstruction/lengthening practice and shared several unique case presentations with us. The hospital also participates in several international multi-center studies on this.
- This hospital serves as the main orthopaedic hospital for many outlying areas, including Greenland and



Example of a limb reconstruction patient.



Dr. Fridberg (left) led her daughter and other POSNA members on a boat and walking tour through Copenhagen.

the Faroe Islands. We learned how they manage outreach clinics and remote travel, and we would recommend any North American center that struggles with the same to reach out to them to learn about their methods.

Cultural Highlights

- After the end of EPOS, Dr. Fridberg led us, her daughter, and several other POSNA members

on a boat and walking tour through downtown Copenhagen.

EPOS Meeting, Copenhagen Denmark

We spent the end of our trip at the EPOS Annual Meeting, gaining different perspectives on common and rare pathologies. As the first all-female traveling fellows, we were flattered to speak at the Women in Orthopaedics Worldwide (WOW) section, and we were inspired by



The POSNA presidential line hosted the fellows for dinner.



The EPOS final reception with new EPOS colleagues and friends from Portugal (left), Denmark (center), and Switzerland (right).

the work our colleagues have done to advance gender equity in the field. We were also honored to share an exceptional dinner as guests of the POSNA presidential line, and we were excitedly impressed at the 100% dance floor participation rate at the EPOS closing dinner ceremony.

Conclusion

The POSNA/EPOS Traveling Fellowship was an unforgettable career and life moment. Our gratitude toward all those who organized our travels, including Teri Stech and Natalia Eicker from POSNA and especially our local hosts, could never be overstated. We each feel so lucky and honored to have been given the opportunity to represent POSNA abroad and to have shared the experience with one another. The most important aspects we took from the experience were the new, deep relationships formed with our EPOS hosts. We are inspired to apply as hosts though fear we will not be able to do that honor the same justice as our hosts did. We encourage every young POSNA and EPOS member

to apply for their respective traveling fellowships. From our trip, we expanded our pediatric orthopaedic family and perspectives while shrinking our world.



The fellows part ways in Copenhagen.

Disclaimer

The authors have no conflicts of interest to disclose pertaining to this invited commentary.