

Obstetrics and Gynecology Ultrasound Fellowship: Experience of Dubrovnik International University Fellowship Program in Dubai

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ABSTRACT

In this article, we review a 4-year experience (2009-2013) with a Postgraduate Fellowship Program in Advanced obstetrics and gynecology Ultrasound under the Academic Mentorship of Dubrovnik International University (DIU), Croatia. The fellowship was conducted in Dubai, Welcare Mediclinic Hospital, and an Academic Teaching Hospital of DIU. Since 2009, we completed four master diploma courses with 38 graduates from the Middle East, Africa and Asia. The concept of the fellowship program did not require internship in our institution and allowed postgraduate students to remain in their professional and private environment. Each fellowship lasted for one year, including six teaching modules of 9 days every other month. The modules consisted of lectures given by international faculty and hands-on in the hospital, in the field of ultrasound in obstetrics and gynecology. The number of participants was limited to twelve in one course. At the end of the fellowship, students had to pass a written, oral and practical examination and hand over a logbook of a minimum of 50 sonographic case documentations. We give detailed account of the fellowship program, medico-legal and administrative specifics, course-related problems and their solutions from the nursing perspective, and describe the organizational challenges.

Keywords: Master's degree, Advanced ultrasound obstetrics and gynecology, Fellowship program, Welcare Mediclinic Dubai, Dubrovnik International University.

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INTRODUCTION

In their recent statement 'Opening up European Education to the World—19 July 2013' in support of lifelong learning, the members of the European Commission urged action on three fronts: (1) international student and staff exchanges, (2) internationalising and improving curricula including digital learning and (3) cooperation, partnerships and capacity building.¹

The European Commission's Lifelong Learning Program wants to enable people at all stages of their lives to take a part in stimulating learning experiences. This concept is not new. Since the foundation of International Ian Donald School for Ultrasound 1982 by Asim Kurjak and George Kossof, it was an integral part of the extremely successful mission of the School. Meanwhile almost 90 nations run their national Ian Donald School branches and organize promotion and dissemination of knowledge in obstetrics and gynecology ultrasound in their countries.²

The highest achievements of postgraduate education, however, Master's degree and PhD, require an umbrella and mentorship of an accredited university. As users and supporters of postgraduate academic education we consider it therefore as a most fortunate development that Dubrovnik International University (DIU) in Croatia, now member of the European Union (EU), has nominated one of the two directors of International Ian Donald School, Prof Asim Kurjak, as the Dean of Medical School and Rector of DIU. Similar fellowship structure to the one in Dubai, UAE was previously established in Doha, Qatar in 2008. Five years of practical experience and positive results will be shared in this article as a motivation for others to start similar program in their academic institutions.

COURSE OBJECTIVES AND TARGET AUDIENCE

Great majority of our fellowship students were obstetrics and gynecology specialists; however, one radiologist joined

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the program as well. Students came from Saudi Arabia, United Arab Emirates (Abu Dhabi, Dubai), Oman, Bahrain, Lebanon, Egypt, Libya, Iran, Indonesia and Turkey.

What did bring them to Dubai? It was the awareness that advanced knowledge in ultrasound is an advantage for both the physicians and their patients. The wish to acquire special skills in ultrasound was ignited in most of our graduates after years of experience in obstetrics and gynecology and was inspired by the daily experience that ultrasound is, in the majority of clinical cases, the fastest, cheapest and, often, the best diagnostic tool which allows timely introduction of appropriate management, and enables follow-up during and after treatment.

It's as simple as that, being a good sonographer gives independence and increases the efficiency of an obstetrician and gynecologist.

However, the situation of our postgraduate students was and is characterized by many personal and professional commitments. Most of them are running their obstetrics and gynecology units or holding responsible positions in their hospitals, and are at the same time successful managers. In addition to busy professional schedule, they have to take care of their families and children. Certainly, they are very motivated to take a part in our Master's Degree Program but how, where, when and with whom?

Maternal fetal specialists have the specific 2 to 3 years training and experience needed to perform complex diagnostic and therapeutic procedures during pregnancy. Similarly, postgraduate ultrasound education requires understanding of the latest instrumentation and techniques applicable to obstetrics and gynecology ultrasound scanning, acquisition of up-to-date medical knowledge and ultrasound scanning skills as well as application of the current issues and concerns in the use of clinical ultrasound. Postgraduate education—the idea of it is certainly not new. The internet is full of online academic curricula for various academic qualifications. However with advanced ultrasound, an online curriculum alone would be insufficient. In this field of clinical medicine, physical contact with patients and equipment for the purpose of practical studies is crucial. Sonography requires specialized education and skills to view, analyze and modify scanning process in order to optimize the information in the image. This task can only be completed with hands-on experience and development of the specific psychomotor skills.³

What did it take to overcome all the obstacles to establish a successful fellowship program? First of all, our course is designed to meet the needs of motivated physicians, sonographers, radiologists and other healthcare providers who use obstetrics and gynecology ultrasound, who search for professional progress and career improvements and, who

are, for the sake of it, willing to bear financial burdens and restrictions of their free time and family life. Secondly, it takes dedicated clinical educators and a teaching program which respects the life circumstances of the learners and the faculty. About 5 years ago, Professor Kurjak started a postgraduate Fellowship Program for Advanced Ultrasound in obstetrics and gynecology in Doha, Qatar. One year later in 2009, in Dubai, UAE, the concept of the program was modified from an internship to a module-based 1 year's program for extern students. All theoretical and practical learning was condensed into six modules of 9 days each, over 1 year. This was considered the most feasible schedule for postgraduate fellowship candidates to minimize their practice downtime and absence from their families. The practical part, the hands-on, was the icing on the cake of this fellowship course, which addressed the attributes of patient care, procedural skills, practice-based learning, evidence-based practice and outcome improvements. Our fellowship program was designed to change the competence of the learners and improve their performance in obstetrics and gynecology ultrasound scanning.

This is where Welcare Hospital comes on the scene as an Academic Teaching Hospital of Dubrovnik International University since 2012. With unconditional support of the senior management of the hospital, Professor Paul Sungler, Medical Director of Welcare Hospital, we were successfully transformed into a private teaching institution. True academic personality of the leadership has recognized the potential of multiple improvements for patient care, staff education and improved rating of the hospital. It is important for the establishment of an academic program like ours that senior executives develop similar professional obligation to help the next generation of leaders by offering residency or fellowship opportunities.⁴ Meanwhile, DIU and Welcare Hospital are busy with the realization of another Master's program which includes hands-on experience in a high-quality hospital set-up: the fellowship in minimal invasive surgery. Looking at the curriculum and faculty involved, it is expected that this program will be another real success of our institutions.

Of course, there is no true academic life and productivity without university. Our Alma Mater is Dubrovnik International University and the future of the fellowship program lays in a close and productive collaboration between DIU and us as academic teaching hospital. All academic teaching projects are now developed and supervised by DIU and its leadership. The ties between Dubrovnik and Dubai were highlighted by the visit of the President of DIU, Professor Miomir Zuzul in January 2012, on the occasion of inauguration of Welcare Hospital as Teaching Hospital of DIU (Figs 1A and B).



Fig. 1A: Mediclinic Welcare Hospital, Dubai



Fig. 1B: Inauguration of Mediclinic Welcare Hospital as Teaching Hospital of Dubrovnik International University on 11th Jan, 2012. The marble plate with the inscription 'Welcare Hospital—Teaching Hospital of Dubrovnik International University' is ceremoniously unveiled in the hospital entrance. From left: Prof Paul Sungler, Medical Director Mediclinic Welcare Hospital, Prof Asim Kurjak, Dean of Medical School and Rector of DIU, Prof Mimir Zuzul, President of DIU, Mr Sakkie van der Vyver, Hospital Director

Together with the Master's diploma in Advanced Obstetrics and Gynecology Ultrasound comes the option of joining a 2 years PhD program with DIU.

FELLOWSHIP PROGRAM STRUCTURE

Lectures

Our students have more than 250 hours of lectures in all relevant areas of obstetrics and gynecology ultrasound. There are six obligatory modules: ultrasound in gynecology, ultrasound in 1st trimester, fetal well-being (fetal biometry and fetal growth), fetal anatomy—placenta—umbilical cord, fetal congenital anomalies, 3D and Doppler in gynecology and infertility, which follow the curriculum which was accepted by the Dean of Medical Faculty at DIU, and was approved by the DIU Senate (Fig. 2; Available at: <http://www.iandonaldschool.org/index.php/resources/books/2-uncategorised/12-ultrasound-in-obgyn-fellowship>).

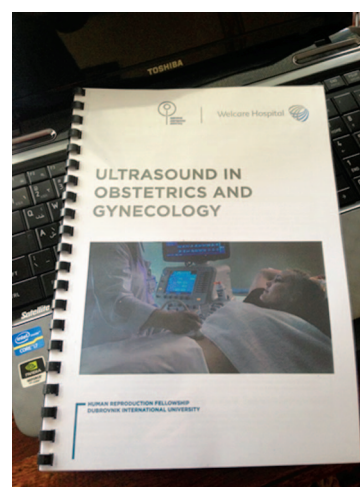


Fig. 2: Curriculum of ultrasound obstetrics and gynecology

The lecturing facilities (lecturing room, overhead projector and IT support) are provided by Welcare Mediclinic in Dubai, UAE. Educational facilities, such as small group lecture hall and flexible-use teaching space, meet all the required international standards. During each of the six modules, one or two international faculty is invited to lecture in their field of expertise. They also take an active role in practical teaching (refer to hands-on). Teaching is always interactive and takes place in small groups. Learners are asked to provide feedback and evaluation of every learning intervention. For that purpose, a standardized speaker DIU evaluation form is provided at the end of each learning session. Our educational activities are supported by course coordinators. Summative examinations in multiple choice assessment format are mandatory, and take place at the end of each module.

An essential part of our educational and training program is to enable students to understand in depth practical applications of ultrasound on the basis of profound theoretical knowledge in obstetrics and gynecology and to stimulate their clinical and scientific reasoning. Our mission is to establish the core of hand-eye coordination and develop critical thinking skills, necessary to execute a systematic ultrasound exam, differentiate normal from abnormal findings and communicate ultrasound findings clearly and in a sensitive manner to their patients and their families. Means to reach this goal was introduction of active involvement of the learners in production of scientific Power Point presentations (PPT) on certain topics, like fetal anomalies, ectopic pregnancy, power doppler in evaluation of adnexal masses, Doppler in obstetrics, etc. Teaching material was recommended in the curriculum and students were expected to study it in detail: Ian Donald School Textbook of Ultrasound in Obstetrics and Gynecology and Donald School Journal Ultrasound Obstetrics and Gynecology (DSJUOG) are mandatory study material.^{5,6}

Hands-on

We strictly limit the size of class to 12, which enables us to focus attention on individual and small group learning. This class size fosters small group dynamics and allows organization of one-one scanning training sessions without sacrificing intimacy for the patients.

Our main focus is to allow adequate hands-on experience. Therefore, three high-end 4D ultrasound machines are available for students in our ultrasound division. To avoid interferences with the busy schedule of the obstetrics and gynecology outpatient department of our hospital, hands-on are organized during weekends of each module (which is in the UAE on Friday/Saturday). Nursing staff and receptionist are provided to expedite the flow of the patients. Dress code policy is applied for our learners and they are obliged to wear white coats with name tags identifying them as fellowship students (refer to 'the nursing perspective'). The practical teaching is conducted by two experienced obstetrics and gynecology specialists, qualified in advanced ultrasound, who are permanently supervising patients' examination by fellowship students. International experts in the field who had come for lectures during the course of 2012, and have supervised hands-on training and taught in depth practical specifics of their field were Prof A Kurjak, Croatia; Prof F Chervenak, USA; Prof R Pooh, Japan (neurosonography); Prof S Kupesic, USA (Doppler, transvaginal sonography); Prof E Merz, Germany (3D ultrasound); Prof M Stanojevic, Croatia (fetal echocardiography); Prof B Funduk-Kurjak, Croatia (transvaginal sonography and infertility); Prof G Monni, Italy (interventional procedures in feto maternal medicine) and Prof G Azumendi, Spain (fetal ultrasound, 3D ultrasound), just to name a few of the international faculty (Fig. 3). Learners are expected to dedicate their attention to comprehensive learning, self-study and practice. Following scanning sessions, learners interact with the faculty trainers and get introduced into the institutional mentoring program.

Patients

When scheduling the appointments for ultrasonography during hands-on, patients are informed about their participation in training and have to give their consent in writing. At the same time, they are given the option to have their scan outside of the teaching program. Careful explanation of our educational program to the patients' results in wide acceptance. This is the way how our patients contribute and acknowledge the necessity of educating future experts in the field of obstetrics and gynecology ultrasound. They also appreciate to have their scan supervised by international faculty who are ultrasound experts in their respective fields. Recruitment of patients and selection



Fig. 3: Professor Giovanni Monni, Italy, demonstrating Chorion Villus sampling during fellowship course

of the most appropriate cases is well planned and starts weeks ahead. Contributors of patients to the hands-on list are seven obstetrics and gynecology consultants at our academic teaching hospital. Sometimes patients are brought in by course students who are working as obstetrics and gynecology specialists within the UAE, and who want to experience the benefit of an expert opinion for their patients. Selection of patients intended to provide a balanced spectrum of gynecological and obstetric cases.

Examinations

Testing areas for theoretical and practical knowledge assessment are chosen for each module and two entire days are dedicated to the final exam. The final examination consists of an oral examination held by two external examiners of the DIU medical faculty, a written essay, and a practical examination with a patient. Each student is individually evaluated. If necessary, the examination may be repeated.

Social Life during the Fellowship

Since most of our students travel to Dubai, UAE from abroad, at the beginning of the program, we provide them with contacts of travel agencies to assist in finding accommodations close to the hospital and suitable for their individual needs and budgets. National and religious differences are quietly respected and never play any negative role in our multinational and multicultural society in Dubai. Soon after the beginning of the program, cordial relationships develop in between the participants, which creates productive and relaxed atmosphere. Though busy with preparing for the next day and their power point presentations, students always find time for social gathering and college campus style environment. Respectful demeanor



Fig. 4: Graduation Ceremony (March 2013) with postgraduate students in Mediclinic Welcare Hospital, Dubai. Third from left: Prof Ulrich Honemeyer, Executive Course Director, Middle: Course Leader Prof Asim Kurjak, Dean of Medical School and Rector of DIU



Fig. 5: Masters Diploma Award ceremony 2011 in Dubrovnik International University. From left: Tessa Donald (daughter of late Prof Ian Donald), Prof Frank Chervenak and Prof Asim Kurjak (Directors of International Ian Donald School), Prof Janice McCormick (Rector DIU), Dr Nadia Faris (UAE), Masters Graduate, President Prof Miomir Zuzul



Fig. 6: Students enjoying a walk on the 'Stradun' in the historical old town of Dubrovnik

between the members of the faculty and the students is mutual. A highlight of student life is always the graduation ceremony in Dubai, and the celebration of the Master's award in the Alma Mater in Dubrovnik, Croatia (Figs 4 to 6).

Medicolegal and Administrative Aspects of the Fellowship Program in General and under the Specific Conditions of Dubai

(By Prof Paul Sungler, Medical Director, Welcare Mediclinic Hospital)

Ian Donald School (IDS) was founded in 1982 by Prof Asim Kurjak and has since then left a global footprint in more than 80 countries around the world. In 2008, the IDS branch in Dubai was founded and since then fellowship programs for Ultrasound in obstetrics and gynecology were held annually. Since 2010, Mediclinic Welcare Hospital hosts the advanced course and provides their clinics equipped with the most modern ultrasound machines for 'hands-on' training. When I joined the hospital as its medical director, there was neither a lot of support nor enthusiasm to support training and academics. But within a short period of time, we were able to convince the senior management team of all the benefits of postgraduate training. Providing scholarly activities challenges the team, keeps them abreast with science which is of benefit for patients and the hospital. Mediclinic Welcare Hospital is very proud to be the Academic Teaching Hospital of Dubrovnik International University since 2012 (Fig. 7).

We introduced a secretary to manage all the organizational challenges and to function as a central service point and 'one-stop-shop' for queries from students and/or faculty (refer to 'practical and organizational challenges of the fellowship program'). To overcome these initial obstacles was the easy task but to handle fellowship programs with 'hands-on' training still remains very difficult. Initially, private hospitals were not allowed to have students inside their facilities at all. The ice was broken when one of the local universities had to seek for training and observation options for their students which we happily agreed to provide, and in return our fellowship courses were accepted.

Recently, I received a draft from the Dubai Health Authority and their Health Regulation Department of the 'Approved Practice Setting and Back to Practice Regulation'. Once implemented officially, it would limit fellowship programs to licensed doctors in Dubai only. Let me quote some extracts from the draft:

'Dubai Health Authority (DHA) is pleased to present the Approved Practice Setting (APS) and Back to Practice (BTP) Regulation which represents a milestone toward fulfilling the following DHA strategic objectives'. To ensure quality, stability and availability of health professionals and to assure quality and supply of undergraduate, postgraduate and continuing medical education in Dubai, this regulation focuses on facility design and training criteria with an emphasis on the quality of training and safety of public and healthcare professionals. It also fulfills the training



Fig. 7: Ratification of cooperation agreement in the Hospital Director's office on 11th of January 2012. Mediclinic Welcare Hospital becomes Academic Teaching Hospital of Dubrovnik International University (DIU). From left: Prof Asim Kurjak, Dean of Medical School DIU and Rector of DIU, Prof Miomir Zuzul, President of DIU (Former Foreign Minister of Croatia, Former ambassador to the USA of Croatia), Prof Paul Sungler, Medical Director of Welcare H, Mr Sakkie van der Vyver, Welcare Hospital Director

requirements for professionals to obtain professional license and provides regulation for delivering Advanced Medical Training (AMT) Programs in private healthcare settings. Medical training programs aim at providing high quality educational activities and hands-on training involving patients or simulation scenarios. It provides opportunity for healthcare professional trainees to enhance their proficiency which leads to better provision of healthcare services.

Training program should have accreditation or affiliation with a university, college or faculty or other accrediting body. Trainer/instructor must have valid DHA license with no current history of malpractice. Trainer/instructor must present evidence of involvement in academic activities relevant to the specialty within past 5 years. The sponsoring health facility must provide adequate and appropriately maintained facilities and learning resources to support the goals and objectives of the program.

For hospitals opting to provide AMT, the hospital management must assign a multidisciplinary clinical faculty with a training director/coordinator, who shall be responsible for the quality of the clinical training programs provided in the hospital. An assistant to the training director/coordinator may also be appointed. The training director/coordinator together with members of the clinical faculty shall be responsible for general administration of the clinical training program and providing a suitable academic environment for the clinical trainees. The training director/coordinator and his/her assistant must be holders of a specialty certificate as per the DHA recognized specialty

certificates tier 2 or 1 only. The program director must have sufficient academic and clinical experience with broad knowledge in the specialty in addition to administrative abilities. There must be mechanisms for the appointment, review and reappointment of teaching staff. There must be a clear line of responsibility and authority for budgeting of training resources. The training program must be adequately funded in order to plan and deliver the program. All trainees undergoing AMT must hold an active DHA license. All trainees must maintain ID badge with two languages (Arabic and English) during the program indicating their status. Patient consent form shall be modified to ensure that it covers acceptance of patient treatment by training licensee, modification shall be at least bilingual (Arabic and English), and translation to other language shall be provided if required. All trainees shall sign a confidentiality agreement with the health facility prior to commencement of the AMT program to safeguard the confidentiality of the patient information. Training liability is solely with the health facility. Malpractice insurance is required for all licensed trainees. Program monitoring is needed for trainees. The health facility management should have mechanism in place to monitor trainer/instructor performance, such as program evaluation forms. Results and outcomes of the program monitoring must be used to improve training provision.'

As can be seen, there is a lot of new and additional rules and regulations to be implemented, additional costs might arise for malpractice insurance and most probably the DHA license will also be an obstacle. But, there is some light on the horizon, as this draft also mentions, that it is not fully applicable, because AMT does not include any diplomas or degree programs.

It is unknown whether and when DHA will also implement a more easily achievable regulation for diplomas or degree programs. Until then, we have to continue in the style of the draft and already existing regulations. At least, Dubai Health Authorities are definitely moving in the right direction to assure quality and supply of postgraduate as well as continuing medical education to keep up with the rapid new developments in academic medicine.

The Nursing Perspective

(By Diana Grobler, Nursing Director, Mediclinic Welcare Hospital)

Welcare Mediclinic Hospital has been affiliated with the Dubrovnik International University and Ian Donald Inter-University School of Medical Ultrasound in particular, since 2010 to the present. This was a new area of exposure and participation for the hospital and understandably brought with it some uncertainty. Welcare Hospital was host to

groups of qualified obstetricians enrolled in the Masters classes for IDS and DIU. The management of any group of students in a busy hospital in itself required teamwork from a number of departments including nursing department. There are some factors to be taken into consideration when entering into such a venture. The transition from being a qualified postgraduate obstetrician to being a student places pressure on the physicians themselves. Entering into a training program, such as this without having established processes in place required a number of meetings with all the role players to get an understanding of the requirements. Logistical considerations by the hospital itself included some of the following:

- Ensuring the availability of the venues for training with appropriate projectors, sound systems and internet access.
- Establishing which consultation rooms would be available to do the practicum. Availability of equipment, such as ultrasound machines for students.
- Signing confidentiality agreements when working with patients.
- Enrolling and identifying the students from other facilities and ensuring they reported to the correct venues required additional staff.
- Obtaining consent from patients willing to participate in the Master classes can be a daunting task.

Additional workload was created in order to accommodate and ensure a smooth flow of procedures and patients:

- Extra housekeeping support was required to clean the rooms and prepare extra meals for the students and patients alike.
- Nursing support for the doctors and patients ensuring that the patients are cared for in a comfortable manner whilst waiting for the examination.
- Approving overtime for additional staff required.
- Registration of patients and preparing medical files and reports were but a number of additional tasks that were undertaken by the nursing team.
- Follow-up appointments with patients had to be scheduled.

Although initially the additional workload was seen as a disadvantage and a burden, this changed rapidly when the team understood the requirements of the training course. Once the process was in place, it became just another procedure handled by nursing in a smooth and efficient manner. The benefits of having the training program in the facility outweighed the disadvantages. Any facility that does not need to send their staff off site for additional qualifications has in itself the benefit of well-trained staff giving quality care, without the additional cost of absence from work, training expenses and accommodation, etc. All

in all, it was a very positive experience for Welcare Hospital nursing and one we would recommend without a doubt.

Practical and Organizational Challenges of the Fellowship Program

(By Natasha John, Executive Secretary, Welcare Mediclinic Hospital)

The numerous times we have organized training sessions for IDS and DIU, we have learnt that the recommended approach for productive outcomes is attention to meeting preparation. Prior to the sessions, the following departments need to be advised on various issues:

- Security department has to ensure that the conference rooms are opened and closed at the required time.
- Housekeeping department ensures that the examination rooms are thoroughly cleaned and arranged as needed.
- Technical department has to test remote connections, teleconference equipment and computer setup and have it ready for use prior to the sessions. One biomedical staff is always on standby to handle any technical failures that may arise, and their contact number was usually with one of the representatives from DIU.
- Catering department has to ensure that there are sufficient refreshments throughout the whole session.

Further to this, we also follow-up that the students have their ID badges ready and the patient consent forms are printed out and ready for use. After the training sessions, we evaluate and plan for improvements in case of any glitches faced along the way. Advice to anyone, planning for these sessions, is to ensure that a gentle reminder is sent to all the departments at least 2 days before the main event.

CONCLUSION

The value of our fellowship course was acknowledged not only by the students but also by all other team players involved in the program. Hospital Director, Medical Director and Nursing Director of the Teaching Hospital, who themselves have residency and/or fellowship experiences, gave full personal and institutional support to this concept of postgraduate education. Both healthcare executives and program directors from DIU agreed that fellowships provide value to the patients, fellowship students and institution. They also felt that the professional obligation on the part of senior healthcare executives and university leadership to help the next generation of medical graduates by developing and optimizing their course program. Our concept of a nonintern, module-based Masters curriculum opens new perspectives of a qualifying and stimulating academic learning experience for postgraduate medical professionals.

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