

## LETTERS

## Lessons learned in terms of Orthopedic resident education in Greece during COVID-19 pandemic

Dear Editor,

Orthopaedic resident education traditionally in Greece have been focused in person to person training mainly in the operating room, inpatient and outpatient interaction tailored to individual experience. Concerning the theoretical and hands on training education, many conferences in national and international level are taking place in Greece each year. In fact, the educational program of each department is being constructed based on the preferences of the director of each unit. Development of surgical skills is the mainstay of residency training in Greece. During Covid-19 pandemic and especially during the lockdown periods, major trauma due to traffic accidents and elective surgical procedures were diminished. If the aforementioned fact is added to the compulsory social distancing it is obvious that Orthopaedic Resident Education went to a crisis during the last 36 months. This crisis created an opportunity to use virtual modalities as Zoom, Webex, video conferences and surgical stimulators as an attempt to substitute the person to person training. International experience from major educational centers was used in order to incorporate virtual technology in orthopaedic resident training. Major meetings in national and international level performed in a virtual mode. The outcomes of this unique situation are tested during the last year that return to normality is gradually evolving. Surprisingly, residents have learned to use internet in a more creative way, to focus on a more independent mode of education and to focus more on applied knowledge in surgical techniques and less on repetitions and learning only by experience. Critical analysis on facts, working on mindset preparation and quality rather than quantity development, seem to be the positive lessons learned during the covid-19 pandemic. This fact is in accordance to the international experience and many residents reported that the virtual mode of training is even more efficient than the traditional mode.<sup>1</sup> In fact, not all individuals are capable in learning that way because it requires in-depth appreciation of the applied skills training protocols rather learning by imitation and repetition. Basic surgical skills development are important in training of junior residents. It seems that this part have been mostly affected. Experience in virtual boot-camps in international level need to be shared in order to be added to a future curriculum in orthopaedic resident training<sup>2</sup>. This period had an important effect in understanding that the lack of a structured computerized modality of keeping patient records and files in an up to date fashion created many problems in terms of patient follow up, taking into consideration the restrictions mainly in outpatient visits. Many cases treated conservatively and the basic knowledge of the conservative management of common fractures and outcome review appreciated accordingly. Unfortunately, many scheduled follow up visits were lost. Another positive fact about the pandemic period is the meticulous adherence to protocols and hopefully it will remain that way in the post-covid era<sup>3</sup>. Crisis should create opportunities to change the view we react to outdated educational processes and it is time that Greek NHS Hospitals should enter a modern digital world that will be more cost effective. Also, the education of the Greek Orthopaedic Residents should follow a modern pattern of critical learning, based on virtual methods that each hospital should provide.

**Keywords:** Orthopedic residency education in Greece, Covid-19, pandemic, virtual training

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