



## Short Communication

## Surgical education in the COVID-19 era: What did the general surgery residents' report in Argentina leave us? Part 2

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## ABSTRACT

Social distancing to curb the COVID-19 pandemic has impacted medical and surgical education. This health crisis led us to raise doubts, controversies, and dilemmas in health care in general, and in surgery in particular, understanding that residents are possibly as or more vulnerable than all health professionals. During the 32nd International Congress of General Surgery in Córdoba, which was the first general surgery congress held in Argentina during 2021; The Association of Residents and Concurrent Surgery of Córdoba presented its official report about the current challenges faced by residents during their surgical training.

## 1. Introduction

In April 2021, during the social, preventive and mandatory isolation due to the COVID-19 pandemic in Argentina, the 32nd International Congress of General Surgery of Córdoba was held. In this event with a hybrid format, the Association of Residents and Concurrent Surgery of Córdoba, presented its report about the generational change in surgery and burnout, the role of a female surgeon, technology as an essential tool for training and how the residences should be adapted in an uncertain social and epidemiological context.

## 2. The figure of a surgeon today: Women in the workforce

For several centuries the female gender has fought for a place in medicine and later in surgery, crossing great obstacles [1]. Gender biases, assaults, discrimination, and tolerant environments of sexual harassment cumulatively contribute to creating a challenging workplace for female surgeons [2]. Women have been positioned in society as “different”, marking an inequality in the different roles to fulfill; thus providing a paradox for them in the field of surgery. Such is the case of women like Elena de Cespedes, who was born around 1546 in Spain, considered the first surgeon in history. She was about 30 years old, when she, dressed as a man, learned the art of surgery from a Madrid surgeon.

She lived with the threat of being expelled from her profession and fought to obtain a surgeon's license. In our country, Cecilia Grierson was the first Argentine doctor, graduated in 1889 from the Faculty of Medical Sciences of the University of Buenos Aires. However, her time at the university was accompanied by a hostile environment and barriers after graduation [3].

At present, the majority of students who graduate from medical school are women, but their insertion in the field of surgery is still questioned. Although the proportion of women who enter general surgery residences has increased to 32% in 2008, no parity is expected until 2028 [4]. In a recent analysis, carried out during the COVID-19 pandemic in Argentina, we found that the number of women in residences with surgical programs was slightly lower compared to men (40.6% vs 59.4%) [5].

In a survey carried out by the Association of Women Surgeons to senior residents and members of the medical school, they reported that 50% of women mentioned experiencing sexual discrimination and 38.5% reported that gender is a barrier to career progress [1].

In view of these challenges, it is not surprising that female surgical residents are 60% more likely to experience burnout and nearly 25% leave the residence during the fourth year compared to 17% of males [6]. There is also a biological prejudice by delaying pregnancy due to their career, with risks of decreased fertility and increased complications

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multimedia allowed clinical departments to implement lectures and teaching sessions for students or to update residents. To overcome the lack of practical experience of the trainee doctor, the access to video libraries was given by videoconferences with patients, as in the case of “Imperial College London”, this encouraged doctors to teach online from the hospital [19]. As regards surgery, “video libraries” are particularly beneficial, and group visualization has been proposed as a more interactive and motivating exercise, and additional expert comment can add educational value. Regarding social networks, Twitter, became a very accessible and used network for the vast majority of students, “tweetorials” (clinical tutorials in a series of tweets that provide links to educational material) which allowed residents interact with world leaders in their areas of interest. “Telemedicine” has become a great instrument for monitoring pathologies in risk patients, in compliance with the mandatory quarantine regime [16]. Thus, there are multiple instruments that are available to staff, under this global event, with advances and methodologies that are here to stay. We can mention that the impact on the training of residents with surgical programs remains unknown and it is estimated that it will have long-term effects, both positive and negative [20]. Therefore, it is important to value a more innovative approach in the training of our professionals through virtual tools and simulation. Currently, simulation is considered one of the most important teaching methodologies in the training of the surgeon, since it allows the training of the different skills that make up the spectrum of professional competence and complement it with the field of research and academic productivity [5].

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