

## How to teach cataract surgery? A realistic and recent review about methods for teaching cataract surgery

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Although cataract removal is the most common elective surgery in some parts of the world, it demands uncommon motor control and concentration to be performed. According to the Accreditation Council for Graduate Medical Education– USA, residents must perform a minimum of 86 cataract surgeries during the three years of residency. However, studies have indicated that the complication rate of resident-performed cataract surgery only becomes acceptable after approximately 100 cases and the International Council of Ophthalmology outlines that specific skills, even advanced ones on cataract surgery should be mastered during residency.

Advancements in cataract surgical technique and instrumentation have light-emitting diode to glorious outcomes for many patients. These improved outcomes have light-emitting diode to higher patient expectations that have fully grown exponentially over the years. These high expectations conjointly apply to residents playing cataract surgery. Most coaching programs are currently developing additional rigorous surgical curriculums to satisfy these higher demands and expectations. Once playing various cataract surgeries year once year, it's usually onerous to recollect however troublesome it's to be told cataract surgery. as a result of each step builds upon the previous one, every step should be performed meticulously with terribly high preciseness. In our teaching program, we've recently adopted the Alfred Dreyfus model of ability acquisition to higher prepare residents for playing surgery. During this new program, we tend to outline stages of learning, set expectations, give resources, and eventually, live and document progress.

Tend to need residents to review surgical videos, watch cataract surgery performed by attending surgeons, scan books regarding cataract surgical techniques and principles, and observe in supervised wet labs. Learning to perform high-quality cataract surgery needs observe patience, and smart mentors.

Structured surgical curriculums are getting more and more necessary with recent stress on quality outcomes. In my expertise, active with residents in wet labs is extremely necessary. Having a resident becomes comfy with the surgical setup, positioning, and foot pedals permits him or her to additional simply specialise in the technique. With the supply of newer, additional realistic wet labs and simulators, the transition to the operating theatre are even easier for residents.

The new methodology allowed for a standardised approach that enabled replicated teaching of phacoemulsification notwithstanding pedagogue or student. once implementing the new methodology, residents performed 1817 phacoemulsification surgeries within the initial year and 1860 within the second year, with posterior capsule rupture rates of eight.42% and 7.9%, severally. Growing legal and ethical concerns surrounding the use of human patients as teaching cases, along with reported increased costs in terms of experienced surgeon time and complication rates with resident-performed procedures, set alternative surgical training models and teaching methods as priorities in many residence programmes around the world. Currently, virtual-reality surgical simulators have begun assuming an important role in phacoemulsification skills training, alongside traditional wet-lab work and master-apprentice training in the operating room. Other types of cataracts surgeries, such as extra capsular vasectomy and manual small incision cataract surgery can still be done on artificial models such as Kitaro kit. Simulation of cataracts surgeries in conjunction with a standardized surgical teaching methodology that can be reproduced and compared, such as the "backward" methodology used at the University of São Paulo and in other international institutions or the OASIS (Objective Assessment of Skills in Intraocular Surgery) and similar, usually lead to lower rates of complications.

Note: This work is partly presented at 2nd International Conference and Expo on Advanced Eye Care and Cataract during June 14-15, 2018 in Rome Italy.