

INSTITUTIONAL DISTINCTIVENESS

Innovative methods of Skill and Competency enhancement in clinical learning

Keeping with the emerging trends in global competencies and utmost attention to patient safety, one of the objectives of medical education is to produce proficient health professionals. In order to refine and perfect the art of skill oriented clinical learning abilities of undergraduate, postgraduate students and faculty, Ramaiah Medical College uses the platform at M S Ramaiah Advanced Learning Center.

A) Cadaver Based Learning:

To practice surgical procedures, the positioning and feel of the cadavers should be near real life unlike the formalin embalmed cadavers. The cadavers should be placed in any operative position such as lithotomy and fetal position. The anatomy department has developed an indigenous embalming technique to preserve their soft, supple and flexible with organoleptic properties. Postgraduate students are put under a rigorous training wherein they practice basic and advanced surgical skills under faculty guidance on cadavers before performing on patients. The wet lab allows microsurgical procedures of ophthalmology, vascular and neurosurgery. **Exposure, demonstration and training in Advance surgical Skills in the field of** Plastic Surgery, Micro Endeavour Surgery, Minimal Invasive Surgery, Laparoscopic, Transplantation – Demonstration and Training (Heart, Kidney, Liver), Joint replacement surgery and spinal surgery/ Trauma center Brachytherapy. The training has successfully translated to clinical practice

B) Simulation Based Learning:

The Endo-trainers: are low fidelity simulators to practice hand-eye coordination for pick and drop, peeling and ligating skills. After certification by faculty, PGs are allocated to high fidelity simulators such as lap mentors, Upper and Lower GI mentors and Broncho mentors. **The Simman 3G, a high-fidelity manikin** is used by Emergency medicine faculty and postgraduates. The undergraduates undergo 4 weeks of skills lab training in Gen. Medicine, Surgery, OBG, Paediatrics, Orthopedics, ENT and Ophthalmology from 4th to 9th term. The students use the manikins to practice clinical and basic surgical skills under faculty guidance.



The **Virtual Reality Training** program runs under the collaboration of the Urbana Champagne Campus of University of Illinois, Chicago.

C) Laparoscopic Based Learning DaVinci Surgical Robot Unit:

Since 2019, by Industry-Academic collaboration the institution has conducted the training of over 100 Laparoscopic surgeons in Robotics on Cadavers. The training is one on one basis for both in house faculty and external consultants. This is one among the select few centers in the World to conduct training on Cadavers (elsewhere the training is on animals).

OUTCOME:

Hundred workshops are conducted so far in various surgical specialties attracting national and international delegates. Based on these experiences, in-house faculty have **been invited as resource persons and guest faculty to various international workshops** conducted all over the world. Heart and kidney transplant surgeries are conducted regularly. The department of Radiation Oncology conducted one of its kind cadaver workshops at the skill lab and is recognized as the **Center of Excellence for Brachytherapy** skills training. The Urology department has installed and conducted Robotic procedures successfully. Success is also evident from the collaboration of industries like Medtronic, Johnson and Johnson with departments of Neurosurgery, Cardiology, Surgery and Ophthalmology.

A handwritten signature in blue ink, appearing to read "M. S. Ramaiah", is written over the printed name of the Principal and Dean.

PRINCIPAL AND DEAN
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