

New Forms Of Neurosurgical Education, The WFNS Role

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Neurosurgical training is usually based on traditional sources of education such as papers, books, direct surgical experience and cadaveric hand-on courses. In low-middle income countries, standard education programs can hardly be pursued mainly owing to the lack of human and economic resources. Digital platforms in these settings could be an alternative solution to bridge the gap between HICs and LMICs in neurosurgical knowledge. The wide improvement of digital technologies created a new array of supportive tools feasible to be integrated into a standard curriculum. These tools have been designed to support different skills of neurosurgical training, including 3D imagination, procedural automatisms, decision making, and to support scientific updating and networking. Most of them are freely available online.

WFNS – Young Neurosurgeons Forum Stream: (www.upsurgeon.com/apps): online channel of scientific advertisement, hosted by the UpSurgeOn Apps, through which the Young Neurosurgeons Forum (WFNS), posts educational content and neurosurgical events in neurosurgery.

Brainbook (<http://www.realbrainbook.co.uk>): UK-based platform created to facilitate neurosurgical case-based-learning, with the ambition to cover every aspect, from patient and family experiences to the more specific technicalities of the procedures.

NeuroMind (<http://www.neuromind.cc>): app/website which offers classifications and grading systems to support the clinical decision making in neurosurgery

UpSurgeOn (www.upsurgeon.com): library of contents designed to improve theoretical knowledge of neuroanatomy and neurosurgical procedures using 3D mobile technologies.

The Neurosurgical Atlas (www.neurosurgicalatlas.com): collection of texts, intraoperative images, illustrations and videos.

Touch surgery (www.touchsurgery.com): free app series which simulates over 100 procedures of all the surgical specialties.

The 100 UCLA Subjects in Neurosurgery (www.neurosurgery.ucla.edu/subjects-in-neurosurgery): selection of a 100 relevant topics developed by the UCLA Department of Neurosurgery as an educational tool for residents of all training levels.

Neurosurgery Survival Guide (NSG) (www.neurosurgerysurvivalguide.com): app which provides quick references to assist the decision-making and management of neurosurgical patients.

EANS Academy: platform containing several types of documents, including abstracts of the congresses, webcasts of the events, and interactive quizzes.

Neurosurgical TV (www.neurosurgical.tv): live webinars by neurosurgeons from all over the world and podcasts from neurosurgical events worldwide.

3D Neuroanatomy (3DN) (www.3dneuroanatomy.com): website providing descriptions and 3D pictures of the main neurosurgical approaches from live surgeries or cadaver lab dissections.