This policy was adopted by the 31th EMSA Autumn Assembly held online on the 10th of October of 2021.
Must be reconsidered until: 10th of October of 2024.

Research Education in Medical Faculties

Authors: Muskan Jain Kotaria, Lina AboElnour, Samin Davoody, Hadi Sleiman, Rahul Bhardwaj, Trishita Choudhury, Nuhat Heval Yiğit, Aikaterini Chatziantoniou, Ioanna Andrikaki, Irem Aktar, Sude Çavdaroğlu.

The European Medical Students´ Association (EMSA) represents medical students across Europe. We envision a healthy and solidary Europe in which medical students actively promote health. EMSA empowers medical students to advocate health in all policies, excellence in medical research, interprofessional healthcare education and the protection of human rights across Europe.

Problem Statement.

A research experience may be the first occasion where students must write and record what they do, think, and find coherently, concisely, and precisely.
Nowadays, undergraduate medical students worldwide try to find opportunities to do research; however, they are mostly unsuccessful due to a lack of options provided among medical faculties. Unaffordable laboratory-based and clinical projects, limited staffing resources, complex research governance procedures are a few barriers to conducting research projects and providing undergraduate students opportunities. As a result, most students are obliged to do post-graduation research. It is a misguided judgment that undergrad research is restricted to intercalated degree courses (Metcalfe D. (2008). In any case, on the off chance that we get back to history, we can see that Charles Best was a medical student when he and his boss, Frederick Banting, found insulin. Alan Hodgkin, educator of biophysics at the University of Cambridge, won the Nobel Prize in 1972 for work on nerve transmission that he started as an undergrad. (Metcalfe D. (2008). Heparin, insulin, the sinoatrial hub, and ether sedation are only a portion of the vast revelations made by clinical understudies.
In 2012, The Association for Medical Education in Europe (AMEE) delivered an aide 'Creating research abilities in clinical understudies' which suggested that each clinical understudy ought to comprehend research techniques and the advantages that examination brings to their calling (Laidlaw, A., Aiton, J., Struthers, J., and Guild, S. (2012).

The World Federation for Medical Education (WFME) has recorded two norms concerning clinical understudy research in its 2015 'Worldwide Standards for Quality Improvement in Medical Education' (WFME. World league for clinical instruction Basic Medical Education WFME Global Standards for Quality Improvement The 2015 Revision. 2015.)

Research experience can raise not just doctors but also scientists and increase medical students' career options. Several associations, organizations, and institutions have also recently created scholarships and fellowships for medical students to pursue international research and training. These efforts and opportunities should be continuously provided for students and monitored carefully.

Our View. Aim.

Research education is crucial to a holistic education of future healthcare professionals, regardless of the medical faculty or the country they study. In addition, the interest generated through medical research helps to build up qualities like work ethics, critical and analytical thinking, helping medical students in their future careers. A higher percentage of medical students wanted to develop advanced health care and inbuilt critical thinking skills, while a few expressed a wish for an extra income. (Stockfelt, M., Karlsson, L. & Finizia, C. (2016). If the teaching program allows the students to explore

medical research areas, it would be an excellent opportunity to enhance their skills further. For this reason, research opportunities should be accessible to all medical students, and universities are the main factor to ensure it.

Although the benefits of research are clear, unfortunately, many medical students stay uneducated about research (Stockfelt, M., Karlsson, L. & Finizia, C. (2016). In another study addressing the main barriers a medical student faced, the questionnaire included four artifacts that outlined students' barriers towards medical research. A lack of allotted time for medical research is to be the principal barrier (80.3%), succeeded by a lack of exposure and opportunities (79.9%), a lack of training and support (78.3%), and finally, a lack of mentoring and guidance (76.6%) (El Achi, D., Al Hakim, L., Makki, M. et al. (2020).

As mentioned above, much literature reveals the crucial needs and barriers to be solved in research education. As European Medical Students' Association (EMSA), we believe that every medical student should be allowed to engage in research activities and improve themselves throughout undergraduate medical education. We have been working on spreading science and implementing more research education in medical faculties in Europe, and we initiated several projects to support medical students. In 2014, we surveyed to evaluate the level of research education in different schools and learn the view of medical students on the topic. Our results are in line with much literature, and mainly there are many obstacles in research education in medical faculties; therefore, we aim to advocate for proper integration of research into the medical curriculum. This year (2021), we have been conducting a follow-up survey study and organising webinars to educate our members.

Recommendations

EMSA calls upon Medical Education NGOs (including but not limited to AMEE and WFME) to:

- promote Open Access platforms to reduce financial constraints that a non-access policy would impose.
- offer funding/fund grants specifically for medical students to facilitate access to research opportunities and research education.
- promote research activities led by students.
- offer mentorship and supervision for students.
- identify the possibilities for improvement in medical education and guide a proper adaptation of the medical curriculum regarding research (skills).
- enable students and educators to learn deeply about conducting topic-wise research projects that will help improve medical education properly.

EMSA calls upon Medical Educators to:

- educate medical students on fundamental research methodology and clinical research objectives and allow them to participate and contribute to research projects.
- allow open discussion between the mentor and mentee.

EMSA Secretariat Rue Guimard 15 1040 Brussels, Belgium Tel : +32 2732 72 02 emsa-europe.eu info@emsa-europe.eu

- guide students to gain a holistic approach towards a medical doctor's career paths, including medical science and research as a career path.
- present medical students with corresponding opportunities to engage with research both inside and outside of faculties, postgraduate opportunities to educate themselves further, and different workplaces where graduates can find occupations, such as research institutes and pharmaceuticals.
- communicate with international students in the appropriate language to present all students with equal opportunities to participate in research projects and resolve the language barrier.
- provide their research to open-access platforms so that students can easily access recognized research work.
- encourage international research opportunities so that teachers and students can interact with researchers on a multicultural level and gain expertise.

EMSA calls upon European Medical Faculties to:

- permanently add Research Education (Research Methodology, Types of Research, Research Publication) to the Medical Curriculum and formulate research training in the core curriculum.
- announce all the research projects running at a specific period and create structured, organized, and accessible programs to present research opportunities to all students.
- establish objective criteria on the selection process and give chances for multiple applicants to be educated.
- organize seminars and workshops on research methodology and specific techniques used in each research project.
- achieve a continuous research education for medical students, whether in preclinical or clinical years.
- create scientific journals to show the work done by students and academic faculty members.
- take steps towards the formal recognition of medical students participating in research internships both in their local academic community and through external associates and reward them with extra points.
- enable interprofessional collaboration in research so that researchers from diverse backgrounds can work together.

EMSA calls upon Faculty Member Organizations and medical students across Europe to:

- participate in scientific projects in their university communities and contribute to the scientific paper publication as undergraduate students.
- plan activities to promote Research Education and research opportunities in medical faculties.
- participate in clinical research projects during their clinical rotations.
- advocate for a better curriculum that addresses research and allows students to engage more in research activities.

Definitions

AMEE : The Association for Medical Education in Europe

WFME : The World Federation for Medical Education

References

- El Achi, D., Al Hakim, L., Makki, M., Mokaddem, M., Khalil, P. A., Kaafarani, B. R., & Tamim, H. (2020). Perception, attitude, practice and barriers towards medical research among undergraduate students. BMC Medical Education, 20(1). https://doi.org/10.1186/s12909-020-02104-6

- International standards in medical education: assessment and accreditation of medical schools' - educational programmes. A WFME position paper. (1998). Medical Education, 32(5), 549–558. https://doi.org/10.1046/j.1365-2923.1998.00302.x

- Laidlaw, A., Aiton, J., Struthers, J., & Guild, S. (2012). Developing research skills in medical students: AMEE Guide No. 69. Medical Teacher, 34(9), 754–771. https://doi.org/10.3109/0142159x.2012.704438

- Metcalfe, D. (2008). Involving medical students in research. Journal of the Royal Society of Medicine, 101(3), 102–103. https://doi.org/10.1258/jrsm.2008.070393

- Stockfelt, M., Karlsson, L., & Finizia, C. (2016). Research interest and activity among medical students in Gothenburg, Sweden, a cross-sectional study. BMC Medical Education, 16(1). https://doi.org/10.1186/s12909-016-0749-3