



---

This policy was adopted by the 5<sup>th</sup> EMSA Spring Assembly in Heidelberg (Germany) on 26/04/2019.

Valid until: 26/04/2022

---



## EMSA European Health Policy Pillar

### **Conflicts of Interest in Medical Education Settings**

Lina Katharina Mosch, Justinas Balciunas, Rowen de Jong, Orsolya Réka Süli

---

*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. The EMSA European Health Policy Pillar is committed to a Europe in which all policies address public health questions, creating a European health care system that promotes patients' empowerment and safety, and provides fair working conditions for the health care workforce.*

## Executive Summary

Physicians face conflicts of interest on a regular basis when interacting with the pharmaceutical industry, starting with their education at university. If medical students lack awareness of the conflicts of interest in their academic surroundings, they risk compromising their independent decision-making abilities, which results in negative effects on both patient safety and research output. Implementation of (1) educational formats on conflicts of interest into medical curricula and (2) conflict of interest policies at medical faculties counteract these negative effects. Therefore, EMSA calls for the implementation of courses that teach students the necessary knowledge and values in how to deal with conflicts of interest, as well as the adoption of policies regulating medical schools' own handling of conflicts of interest.

## Introduction and Background

A conflict of interest can be defined as *a set of conditions in which professional judgment concerning a primary interest (such as patients' welfare or the validity of research) tends to be unduly influenced by a secondary interest such as financial gain (Thompson 1993)*. It has been proven that conflicts of interest influence the decision-making and prescription behavior of doctors, which may in turn endanger patients' safety and increase costs (*Fickweiler, Fickweiler, and Urbach 2017*).

Physicians first encounter conflicts of interest in their education at university. (*Lieb and Koch 2013; Lea, Spigset, and Slørdal 2010*) Despite this, European universities do not transparently reveal these conflicts of interest to medical students. Moreover, they receive little to no education on how to appropriately manage interactions with the health industry (e.g., pharmaceutical and medical device industry). (*Santos 2017; Tielrooij 2016*)

The American Medical Student Association's (AMSA) "Model PharmFree Curriculum" represents one approach on how to implement transparency regarding conflicts of interest into the medical curriculum. AMSA outlines five competencies that medical students should acquire in order to be able to successfully navigate complex physician-industry interactions. The Model PharmFree Curriculum suggests concrete educational formats, topics, learning outcomes and suggestions where transparency topics can be included in the curriculum (*American Medical Student Association 2012*).

Medical students observe physicians throughout their training and learn by example. Hence, the manner in which universities and university teachers handle conflicts of interest is of great

importance for the scientific and professional integrity of future European doctors (Wayne, Green, and Neilson 2017). The implementation of policies regulating the manner in which medical schools handle conflicts of interest has proven to have a significant positive impact on physicians' prescription behavior (King et al. 2013). However, so far, there has been no structured, comprehensive assessment of conflict of interest policies at European universities. Studies from Germany and France show that only a few medical faculties adopted guidelines on how to deal with conflicts of interest (Lieb and Koch 2014; Scheffer et al. 2017).

The impact that medical students can have on the implementation of conflicts of interest policies has been shown. For instance, AMSA has been regularly evaluating conflict of interest policies at American medical schools since 2008. The AMSA scorecard assesses policies annually, aiming to decrease the influence of health industry on medical trainees. Its implementation has led to a distinct strengthening of medical schools' conflict of interest policies by 2013 (Carlat et al. 2016).

## Discussion

The quality of medical education is an essential primary interest in healthcare that should be protected against any secondary interests (Lo, Field, and Institute of Medicine (U.S.) 2009). If medical students lack awareness of conflicts of interest in their academic surroundings, they risk compromising their independent decision-making ability. (Wayne, Green, and Neilson 2017). The negative effects of interactions between the health industry and healthcare professionals on prescription behaviour, research output and the emergence of ethical dilemmas have been described in various studies (Latten et al. 2018; Yeh et al. 2016). Thus, in order to prepare medical students to handle conflicts of interest adequately, they need to receive appropriate education on the topic (Kao et al. 2011; Maury Pasquier 2015).

The exposure to pharmaceutical marketing happens early in medical education and encompasses the vast majority of medical students (Austad, Avorn, and Kesselheim 2011). Thus, education on conflicts of interest, evidence-based medicine (EBM), as well as on drug development, marketing and approval has to be part of medical education early in the curriculum (American Medical Student Association 2012).

The involvement of drug companies in medical education has proven to lead students to developing a more positive opinion pharmaceutical industry (Stanley, Jackson, and Barnett 2005; Wofford and Ohl 2005). In the early years of their studies, medical students are not yet experienced with conflicts of interest, and are thus more susceptible to biases that arise from them. What's more, failing to

disclose conflicts of interest can lead to underestimation of existing biases and their possible reinforcement (Loewenstein, Sah, and Cain 2012). To avoid these influences on students' attitudes, the AMSA PharmFree curriculum recommends the complete abandonment of industry participation in medical education, as well as the prohibition of lecturers in a preclinical setting "from teaching subjects for which they have conflicts of interest whenever suitable alternatives are available" (American Medical Student Association 2012).

European medical faculties hesitate to implement policies that regulate their dealing with conflicts of interest (Lieb and Koch 2014; Scheffer et al. 2017). However, the study by Scheffer et al. proved to have an impact on legal and academic authorities: In 2017, the Deans' Conferences of Medicine and Odontology Schools in France adopted a charter, setting responsibility guidelines for the medical faculties in regard to raising awareness and educating their medical students on conflicts of interest. Moreover, it recommended the adoption of additional guidelines concerning scientific integrity, transparency and ethics (Deans' Conferences of Medicine and Odontology Schools 2017). In order to ensure that equivalent guidelines are put in place and strengthened in medical faculties all across Europe, there is an urgent need for a structured, comprehensive assessment of conflict of interest policies in universities.

In Europe, a universal legal framework for transparency in healthcare collaborations is hard to achieve due to the different legislations and responsibilities in member states that already hinder a thorough assessment of national transparency policies (Rodzinka, Fallon-Kund, and Marinetti 2019). This leads to the conclusion that the engagement of medical students in Europe has the potential to be the driving force for the implementation of transparency into medical education.

## Recommendations

**EMSA calls European medical faculties and university hospitals to:**

- Sustainably implement courses that enable medical students to:
  - 1) Understand the nature of conflicts of interest and how they pertain to the practice of medicine;
  - 2) Recognize how industry can impact clinical care and develop strategies to mitigate the negative influences; and
  - 3) Properly manage industry relations to maximize patient and societal benefit.into their curricula, starting from the first year, conform to the AMSA PharmFree curriculum.
- Incorporate education on:

- Professionalism and Conflict of Interest
- Drug and Device Development
- Determining Drug and Device Safety and Efficacy
- Marketing and Physician Practice
- Continuing Medical Education

into their curricula, starting from the first year, conform to the AMSA PharmFree curriculum.

- Adopt a policy or guideline regulating the handling of conflicts of interest encompassing:
  - To oblige professors and teachers in medical education to disclose conflicts of interest with companies of the health industry to the audience before they hold an educational format.
  - To oblige medical faculties and their employees to disclose conflicts of interest with companies of the health industry on a public, easily accessible platform.
  - To abandon industry participation in medical education.
  - To prohibit lecturers in preclinical education who have conflicts of interest regarding topics they hold lectures on.
  - To obviate medical students' encounters with sales representatives of the health industry during clinical education.

#### **EMSA calls on member states and European Institutions to:**

- Raise public awareness for the topic of transparency of collaborations in healthcare.
- Follow the call of the Council of Europe's Parliamentary Assembly: *"6.1.1. incorporate into the curriculum for health-care professionals specific, mandatory training to foster awareness of the influence of pharmaceutical promotion and how to respond"* (Maury Pasquier 2015).
- Support an assessment of conflict of interest policies at European medical faculties.
- Invest in the vocational training of healthcare professionals, fostering greater awareness of the influence of pharmaceutical promotion and how to respond to it.
- Invest in research on actions in relation with conflicts of interest and the implementation of conflict of interest policies at European universities.

#### **EMSA commits itself to:**

- Raise awareness among its members for the topic of conflicts of interest and transparency of collaborations in healthcare, especially in medical education.
- Assess possibilities to implement a regular assessment of conflict of interest policies at European universities and work towards its realisation.



## Conclusion

Awareness of conflicts of interest in healthcare collaborations and education on how to handle them are essential for the professional and scientific integrity of future doctors. This is being widely neglected in European medical faculties. Therefore, EMSA calls on European medical faculties to: firstly, implement courses on how to deal with conflicts of interest and secondly, adopt a guideline regulating their own handling of conflicts of interest. Furthermore, EMSA calls on European Institutions and member states to raise public awareness for this topic, encourage medical schools to implement courses on the topic and allocate financial resources on training and research regarding conflicts of interest in healthcare. EMSA acknowledges the importance of handling conflicts of interest as part of medical education and commits itself to work on it.



## Definitions

### List of abbreviations:

EMSA	The European Medical Students' Association
AMSA	The American Medical Student Association
EBM	Evidence-based medicine

### List of definitions:

Conflict of interest: “[...] a set of conditions in which professional judgment concerning a primary interest (such as patients' welfare or the validity of research) tends to be unduly influenced by a secondary interest such as financial gain” (*Thompson 1993*)

Evidence-based medicine: “The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.” (*Sackett 1997*)

## References

- [http://www.interessenskonflikte.de/wp-content/uploads/2018/06/Bewertungskriterien\\_Interessenkonfliktstudie\\_Version1\\_42.pdf](http://www.interessenskonflikte.de/wp-content/uploads/2018/06/Bewertungskriterien_Interessenkonfliktstudie_Version1_42.pdf); last accessed: 12.02.2019
- <http://www.allea.org/wp-content/uploads/2017/04/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017.pdf>; last accessed: 12.02.2019
- <http://www.amsa.org/wp-content/uploads/2015/03/ModelPharmFreeCurriculum.pdf>; last accessed: 12.02.2019
- <http://www.amsa.org/wp-content/uploads/2015/03/ModelPharmFreeCurriculum.pdf>; last accessed: 10.02.2019
- <http://formindep.fr/wp-content/uploads/2017/11/dean-charter-english.pdf>; last accessed: 10.02.2019
- <http://semantic-pace.net/tools/pdf.aspx?doc=aHR0cDovL2Fzc2VtYmx5LmNvZS5pbmQybncveG1sL1hSZWYvWDJILURXLWV4dHluYXNwP2ZpbGVpZD0yMjAzMCZsYW5nPUVO&xsl=aHR0cDovL3NiZWVudGljcGFjZS5uZXQvWHNsdC9QZGYvWFJlZi1XRC1BVC1YUWwyUERGLnhzbA==&xsltparams=ZmlsZWlkPTlyMDMw>; last accessed: 10.02.2019
- <https://mhe-sme.org/wp-content/uploads/2019/01/MHE-SHEDDING-LIGHT-REPORT-Final.pdf>; last accessed: 10.02.2019
- [http://www.interessenskonflikte.de/wp-content/uploads/2018/06/Bewertungskriterien\\_Interessenkonfliktstudie\\_Version1\\_42.pdf](http://www.interessenskonflikte.de/wp-content/uploads/2018/06/Bewertungskriterien_Interessenkonfliktstudie_Version1_42.pdf); last accessed: 10.02.2019
- American Medical Student Association. 2012. 'Evidence and Recommendations for a Model PharmFree Curriculum'.  
<http://www.amsa.org/wp-content/uploads/2015/03/ModelPharmFreeCurriculum.pdf>.
- Austad, Kirsten E., Jerry Avorn, and Aaron S. Kesselheim. 2011. 'Medical Students' Exposure to and Attitudes about the Pharmaceutical Industry: A Systematic Review'. Edited by Joel Lexchin. *PLoS Medicine* 8 (5): e1001037. <https://doi.org/10.1371/journal.pmed.1001037>.
- Carlat, Daniel J., Teddy Fagrelus, Reshma Ramachandran, Joseph S. Ross, and Sallyann Bergh. 2016. 'The Updated AMSA Scorecard of Conflict-of-Interest Policies: A Survey of U.S. Medical Schools'. *BMC Medical Education* 16 (1). <https://doi.org/10.1186/s12909-016-0725-y>.
- Deans' Conferences of Medicine and Odontology Schools, ed. 2017. 'Ethical and Deontological Charter of the Deans' Conferences of Medicine and Odontology Schools'.  
<http://formindep.fr/wp-content/uploads/2017/11/dean-charter-english.pdf>.
- Fickweiler, Freek, Ward Fickweiler, and Ewout Urbach. 2017. 'Interactions between Physicians and the Pharmaceutical Industry Generally and Sales Representatives Specifically and Their Association with Physicians' Attitudes and Prescribing Habits: A Systematic Review'. *BMJ Open* 7 (9): e016408. <https://doi.org/10.1136/bmjopen-2017-016408>.
- Kao, Audiey C., Clarence Braddock, Maria Clay, Donna Elliott, Scott K. Epstein, William Filstead, Tim Hotze, Win May, and Jennifer Reenan. 2011. 'Effect of Educational Interventions and Medical School Policies on Medical Students' Attitudes Toward Pharmaceutical Marketing Practices: A Multi-Institutional Study'. *Academic Medicine* 86 (11): 1454-62.  
<https://doi.org/10.1097/ACM.0b013e3182303895>.
- Latten, Tom, Daan Westra, Federica Angeli, Aggie Paulus, Marleen Struss, and Dirk Ruwaard. 2018. 'Pharmaceutical Companies and Healthcare Providers: Going beyond the Gift - An Explorative Review'. Edited by Joel Lexchin. *PLOS ONE* 13 (2): e0191856.  
<https://doi.org/10.1371/journal.pone.0191856>.
- Lea, Dordi, Olav Spigset, and Lars Slørdal. 2010. 'Norwegian Medical Students' Attitudes towards the



- Pharmaceutical Industry'. *European Journal of Clinical Pharmacology* 66 (7): 727-33. <https://doi.org/10.1007/s00228-010-0805-6>.
- Lieb, Klaus, and Cora Koch. 2013. 'Medical Students' Attitudes to and Contact With the Pharmaceutical Industry'. *Deutsches Aertzblatt Online*, September. <https://doi.org/10.3238/arztebl.2013.0584>.
- . 2014. 'Interessenkonflikte im Medizinstudium. Fehlende Regulierung und hoher Informationsbedarf bei Studierenden an den meisten deutschen Universitäten'. *GMS Zeitschrift für Medizinische Ausbildung*; 31(1):Doc10; ISSN 1860-3572. <https://doi.org/10.3205/zma000902>.
- Lo, Bernard, Marilyn J. Field, and Institute of Medicine (U.S.), eds. 2009. *Conflict of Interest in Medical Research, Education, and Practice*. Washington, D.C: National Academies Press.
- Loewenstein, George, Sunita Sah, and Daylian M. Cain. 2012. 'The Unintended Consequences of Conflict of Interest Disclosure'. *JAMA* 307 (7): 669. <https://doi.org/10.1001/jama.2012.154>.
- Maury Pasquier, Liliane. 2015. 'Public Health and the Interests of the Pharmaceutical Industry: How to Guarantee the Primacy of Public Health Interests?' Edited by Committee on Social Affairs, Health and Sustainable Development and Council of Europe, Parliamentary Assembly. <http://semantic-pace.net/tools/pdf.aspx?doc=aHR0cDovL2Fzc2VtYmx5LmNvZS5pbmQvbnvveG1sL1hSZWYvWDJILURXLWV4dHluYXNwP2ZpbGVpZD0yMjAzMCZsYW5nPUVO&xsl=aHR0cDovL3NlbWVudGljcGFjZS5uZXQvWHNsdC9QZGYvWFJlZi1XRClBVC1YTUwyUERGLnhzbA==&xsltparams=ZmlsZWlkPTlyMDMw>.
- Rodzinka, Marcin, Marie Fallon-Kund, and Claudia Marinetti. 2019. 'Shedding Light on Transparent Cooperation in Healthcare - The Way Forward for Sunshine and Transparency Laws across Europe'. *Mental Health Europe*. <https://mhe-sme.org/wp-content/uploads/2019/01/MHE-SHEDDING-LIGHT-REPORT-Final.pdf>.
- Sackett, David L. 1997. 'Evidence-Based Medicine'. *Seminars in Perinatology* 21 (1): 3-5. [https://doi.org/10.1016/S0146-0005\(97\)80013-4](https://doi.org/10.1016/S0146-0005(97)80013-4).
- Santos, Ancel.la. 2017. 'Education on Pharmaceutical Promotion in Medical Training'. *Health Action International*, 14.
- Scheffer, Paul, Christian Guy-Coichard, David Outh-Gauer, Zoéline Calet-Froissart, Mathilde Boursier, Barbara Mintzes, and Jean-Sébastien Borde. 2017. 'Conflict of Interest Policies at French Medical Schools: Starting from the Bottom'. Edited by K. Brad Wray. *PLOS ONE* 12 (1): e0168258. <https://doi.org/10.1371/journal.pone.0168258>.
- Stanley, A. G., D. Jackson, and D. B. Barnett. 2005. 'The Teaching of Drug Development to Medical Students: Collaboration between the Pharmaceutical Industry and Medical School'. *British Journal of Clinical Pharmacology* 59 (4): 464-74. <https://doi.org/10.1111/j.1365-2125.2005.02374.x>.
- Thompson, Dennis F. 1993. 'Understanding Financial Conflicts of Interest'. *New England Journal of Medicine* 329 (8): 573-76. <https://doi.org/10.1056/NEJM199308193290812>.
- Tielrooij, Brian. 2016. 'Pharmaceutical Promotion in Medical and Pharmacy Education in the Netherlands: Readiness for Curriculum Change', 72.
- Universities Allied for Essential Medicines Deutschland, ed. 2018. 'Studie Zur Regulierung von Interessenskonflikten Durch Die Medizinischen Fakultäten in Deutschland - Bewertungskriterien'. [http://www.interestenskonflikte.de/wp-content/uploads/2018/06/Bewertungskriterien\\_Interessenskonfliktstudie\\_Version1\\_42.pdf](http://www.interestenskonflikte.de/wp-content/uploads/2018/06/Bewertungskriterien_Interessenskonfliktstudie_Version1_42.pdf).
- Wayne, Diane B., Marianne Green, and Eric G. Neilson. 2017. 'Teaching Medical Students About Conflicts of Interest'. *JAMA* 317 (17): 1733. <https://doi.org/10.1001/jama.2017.2079>.
- Wofford, James L, and Christopher A Ohl. 2005. 'Teaching Appropriate Interactions with



Pharmaceutical Company Representatives: The Impact of an Innovative Workshop on Student Attitudes'. *BMC Medical Education* 5 (1). <https://doi.org/10.1186/1472-6920-5-5>.

Yeh, James S., Jessica M. Franklin, Jerry Avorn, Joan Landon, and Aaron S. Kesselheim. 2016.

'Association of Industry Payments to Physicians With the Prescribing of Brand-Name Statins in Massachusetts'. *JAMA Internal Medicine* 176 (6): 763.

<https://doi.org/10.1001/jamainternmed.2016.1709>.