

# 36 different ways to study medicine

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## Report

There are 35 public and one private medical school in Germany and almost as many ways to study medicine. Curricula vary hugely in the way subjects are taught, when they are taught and for how long they are taught and there is a bewildering variety of additional mandatory courses offered.

Officially, there are only two different medical curricula in Germany: the traditional and the model curriculum. The latter is offered by only a few universities. An important difference between the two types is that in the model curriculum students are not required to take the first national medical licensing examination at the end of the second year. This could be an excellent opportunity for universities that have adopted the model curriculum to develop an integrated curriculum and to design innovative courses.

Most medical faculties offer the traditional curriculum, which starts with two years of basic science education and three months of nursing training in a hospital. The nursing experience is intended to give students a first impression of working in health care and of the organization of a hospital as well as first-hand knowledge of nursing as a profession, which may facilitate interprofessional teamwork later on.

At the end of the first two years students have to pass the first of two national medical licensing examinations, which consists of a written test with multiple-choice questions and an oral examination. The multiple-choice questions are developed by the national Institute for Medical and Pharmaceutical Examination Questions (IMPP), a public-law institution which is authorized by the state examination offices to develop the multiple-choice questions and which is also responsible for quality assurance of questions. The oral examination is not structured by nationally defined guidelines or a blueprint nor is it subject to an external quality assurance process. This precludes comparisons between the different curricula. Having passed the first national medical licensing examination, students move on to the three-year clinical science part of the curriculum. Clinical science teaching covers all clinical disciplines. It is during this part of medical education that the differences between the universities are particularly marked. Curricula differ in the sequencing of subjects as well as in the duration and depth of teaching. When they reach the end of this curricular phase students have passed at least 34 summative exams [1].

The medical licensing requirements (Approbatonsordnung für Ärzte (ÄAppO)) state that, in addition to theoretical education, students must attend 476 hours of small-group bedside teaching including five clerkships (Block-

praktika): in internal medicine, surgery, paediatrics, gynaecology and family medicine. Depending on the discipline, the ward-based clerkships last one to six weeks, during which students learn about differential diagnosis and treatment of the main diseases encountered in clinical practice.

Besides the university-based curriculum students have to complete four months of elective clerkships in a hospital of their choice, where they observe and work together with a doctor to become familiar with patient care [2]. The clerkships are unstructured and learning content is not clearly defined. As a result learning outcomes strongly depend on students' chosen hospital and discipline, doctors' motivation to teach and students' motivation to learn.

The final year - the so-called 'Praktisches Jahr' (PJ) or Practical Year - consists of 48 weeks of full-time clinical rotations during which students work under supervision in a teaching hospital or in the university hospital. Rotations in surgery and internal medicine are mandatory and students are free to choose the discipline of their third rotation [3]. Undergraduate education ends with the second national medical licensing examination consisting of 320 multiple-choice questions developed by the IMPP and an oral examination about the three PJ disciplines and interdisciplinary topics. During the first part of the oral examination students interview and examine a patient and the second part consists of an unstructured interview by a local examination board.

After passing the second national examination, graduates are licensed to practise medicine (MD). Most medical graduates, however, enter a specialty training programme, which takes from four to six years, depending on the specialty.

With regard to the doctoral thesis, the position of medical students in Germany is rather exceptional compared to that of students in other academic fields. They are allowed to work on and even finish their thesis during their undergraduate studies. Requirements regarding the quality, length and depth of the thesis are rarely defined. As a result, only few students undertake a PhD programme in medicine.

In an outline of medical education in Germany from a students' perspective the following strengths and weaknesses have to be pointed out.

One weakness of the German system is the allocation of university places. Twenty per cent of applicants are admitted on the basis of the grade point average of their secondary school diploma, 20% are admitted based on waiting time and 60% are admitted after taking part in a selection process, which each faculty is free to design as it considers appropriate. However, universities rarely use an individual admission procedure and students are mostly admitted on the basis of their grade point average. It is highly unusual for extracurricular activities, internships, motivation, skills, empathy and social commitment to be taken into account in admission decisions.

The latest revision of the ÄAppO has helped to improve medical education, because it requires more competency-

based and student-centred education. It is stated that medical education should be aimed at delivering doctors whose scientific and practical training qualifies them to practise medicine independently and to undertake continuous training [4]. It is also stated that priority must be given to small group and bedside teaching in order to promote practice-based education.

Nevertheless the solution to many practical problems faced by students will depend on the actual implementation of the required changes.

The separation between basic science and clinical science education is still very much in evidence - particularly in the traditional curricula. As mentioned above the main obstacle to the implementation of integrated curricula is the timing and content of the first national medical licensing examination.

Even though the ÄAppO emphasizes that the aim of medical education is to educate and train doctors who can practise medicine independently, German medical education occasionally still tends to focus more on irrelevant details than on core knowledge, competencies and personal development. During the PJ in particular, students experience a lack of clear learning objectives and a structured education programme [5]. The need for a national core curriculum which emphasizes well-defined key competencies and uses new assessment instruments, such as the Objective Structured Clinical Examination (OSCE) is felt with increasing urgency. Unfortunately, although OSCEs are gaining in importance, they are currently the exception rather than the rule.

The oral exams of the first and second national examination suffer from a lack of standardization. Although the MCQs used in the written exam are of high quality, the oral exams are characterized by a lack of structure and quality assurance.

The diversity of medical education programmes seriously hampers student mobility. The single time during the medical curriculum when students possess at least comparable certificates of performance is after the first national examination. However, due to the strictly limited number of university places, even at this point the most frequently used strategy for switching placements is to find an exchange partner. Unfortunately, transferring to another university at any other time is likely to cause a study delay of one semester in most cases. Student mobility during the PJ is restricted as well - paradoxically more strongly within German borders than internationally. In this outline of important aspects of medical education in Germany the current discussion about the Bologna process cannot be ignored. The Bologna objectives of mobility, comparable degrees, inclusion of higher education institutions and students, quality assurance and lifelong learning<sup>5</sup> are welcomed by many students in Germany. However, it should also be pointed out that many students are sceptical about the implementation of the bachelor-master-structure in the medical curriculum. There is serious and widespread concern among students that faculties may simply force the current curriculum into a bachelor-master structure - as has been

done in many other fields of study in Germany. The bvmd therefore has adopted a Statement of Beliefs of the International Federation of Medical Students' Associations (IFMSA), discussing conditions, strengths and weaknesses of potential approaches to a bachelor-master curriculum [6].

As a German approach, the bvmd proposes to set up a "Bologna in Medicine" pilot project [7] aimed at a thorough assessment of the advantages and disadvantages of the Bologna process in medicine.

As medical students, we are the ones who daily witness "Medical Education" first hand. We listen to good and bad lectures, participate in well-structured or superfluous seminars, learn a lot or get bored during clerkships. We are all in favour of student-centred education as it is set out in the ÄAppO and we welcome the first success of the rethinking of our education programme. We will follow any new developments in medical education in the near future with a keen interest and we would very much like to contribute to that.

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