The Notfallseminar of the Medizinercorps Graz: Implementation of a specialised education programme in prehospital emergency medicine at the Medical University of Graz

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BACKGROUND
The Medizinercorps was founded in 1890 due to a shortage of emergency physicians in Graz (Austria). Since then, medical students were recruited and trained in prehospital emergency medicine to improve prehospital medical care in a city with 320,000 inhabitants (2017). After having completed an extensive education programme, the so-called NKI-RM (rescue medic with special emergency skills) is then enabled to perform diagnostic procedures, as well as emergency and other medical interventions. The NKI-RM programme is covered under the Austrian Act on Ambulance Service Members (2002). NKI-RM are staffing two emergency ambulance vehicles that have remained to be an integral part of a “Dual emergency medical care system”, which is unique in Graz.

METHODS
Within the past few years, the NKI-RM training programme has been extended and optimized. A curriculum, describing the three pillars of the education programme in detail, has recently been defined. The modalities of this programme were specified and empirically evaluated. Motivation and characteristics of the last year’s participants of the Notfallseminar were evaluated by using a questionnaire.

RESULTS
Each year, approximately 15 medical students complete their NKI-RM training programme. The programme includes training courses and clinical electives by the Medical University of Graz, accredited training hospitals, the Red Cross and special workshops and manikin-training by the Medizinercorps including the Notfallseminar. The Medizinercorps-specific part offers 111 apprenticeship, characterized by peer-assisted learning and bedside-teaching for several month. Altogether, the programme has been extended to more than 6000 hours, during which the NKI-RM candidate already gains practical experience. The Notfallseminar is part of the NKI-RM programme and open for every medical students with interest in prehospital medicine. In average, approximately 60 students are participating at the Notfallseminar: 80% of the participants are volunteering in ambulance services, only 50% of them are attending the NKI-RM training programme. Approximately 10% of the participants are students from external universities in Austria and Germany.

CONCLUSIONS
After completing a special programme in emergency medicine, medical students perform life-saving emergency procedures during their voluntary service as NKI-RM staffing emergency ambulance vehicles of the Austrian Red Cross in Graz. In the presence of unstable vital signs in prehospital emergency patients, advanced life support is commenced immediately until an emergency physician arrives on scene. One part of the extensive training programme is the Notfallseminar of the Medizinercorps, which is now open for interested medical students and will be implemented as elective course at the Medical University of Graz.

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The Notfallseminar is an emergency tutorial organized by volunteers within the Medizinercorps and was offered on a regular basis since 1959 (approximately once every two years). The four-day tutorial include theoretical and practical course contents in prehospital emergency medicine and is part of the abovementioned NKI-RM training programme. Traditionally, exclusively medical students which were members of the Medizinercorps were participating, but nowadays the Notfallseminar is open to all interested medical students and will be implemented into the course programme of the Medical University of Graz.

Methods: Within the past few years, the NKI-RM training programme has been extended and optimized. A curriculum, describing the three pillars of the education programme in detail, has recently been defined. The modalities of this programme were specified and empirically evaluated. Motivation and characteristics of the last year’s participants of the Notfallseminar were evaluated by using a questionnaire.

Results: Each year, approximately 15 medical students complete their NKI-RM training programme. The programme includes training courses and clinical electives by the Medical University of Graz, accredited training hospitals, the Red Cross and special workshops and manikin-training by the Medizinercorps including the Notfallseminar. The Medizinercorps-specific part offers 1:1 apprenticeship, characterized by peer-assisted-learning and bedside-teaching for several month. Altogether, the programme
has been extended to more than 6000 hours, during which the NKI-RM-candidate already gains practical experience. The Notfallseminar is part of the NKI-RM programme and open for every medical students with interest in prehospital medicine. In average, approximately 60 students are participating at the Notfallseminar. 80% of the participants are volunteering in ambulance services; only 50% of them are attending the NKI-RM training programme. Approximately 10% of the participants are students from external universities in Austria and Germany.

**Conclusion:** After completing a special programme in emergency medicine, medical students perform life-saving emergency procedures during their voluntary service as NKI-RM staffing emergency ambulance vehicles of the Austrian Red Cross in Graz. In the presence of unstable vital signs in prehospital emergency patients, advanced life support is commenced immediately until an emergency physician arrives on scene. One part of the extensive training programme is the Notfallseminar of the Mediziner-corps, which is now open for interested medical students and will be implemented as elective course at the Medical University of Graz.