Antibiotic use: knowledge, attitudes and practices among health profession students in Italy
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Background
The threat of antibiotic resistance has become a worldwide public health concern, with a substantial economic and clinical burden. In this regard, the World Health Organization estimated that this problem leads, in the European hospitals, to an excess of mortality of 25,000 people every year. Antibiotic misuse, mainly related to physicians’ lack of knowledge and wrong prescribing behaviour, is one of the leading cause of antibiotic resistance. On account of this, it is essential to focus the attention on health profession students. The objective of the present study is to evaluate the knowledge and the attitudes of the students of the School of Medicine of Turin about antibiotic usage and antibiotic resistance.

Methods
On December 2013, a cross sectional study among health profession students was conducted at the School of Medicine of the University of Turin. A 45-point self-administered questionnaire, developed after a literature review of comparable studies and previously validated by a pilot study, was administered during regular class sessions. Data were analysed through logistic regressions.

Results
Overall, 1,050 students were interviewed. Around 20% of the sample stated that antibiotics are appropriate for viral infections. Interestingly, 15% of the students interviewed claimed to stop taking antibiotics when symptoms decrease and 17.7% declared to use leftovers antibiotics without consulting a doctor. Females were more likely than males to take antibiotics only when prescribed (OR 1.43, 95% CI = 1.04-1.98). Moreover, students with a relative working in a health related field and those who took at least one course of antibiotics in the last year had a lower probability to take these drugs only under prescription (OR 0.69 95% CI = 0.49-0.97 and OR 0.38 95% CI = 0.27-0.53, respectively).

Conclusions
The present paper demonstrated how healthcare profession students don’t practice what they know. Since the health professional students will be a behavioural model for citizens and patients, it is essential to create more awareness on this topic during the degree courses. It would be advisable to introduce specific course and training about the importance of correct antibiotic consumption in the European core curriculum of the School of Medicine.

Key messages
- Results of our survey showed that, despite a good level of knowledge, healthcare profession students had incorrect behaviours concerning antibiotic consumption.
- Specific courses and training to strengthen the importance of correct antibiotic consumption on decreasing antibiotic resistance should be implemented in the School of Medicine.