

ANEXO I: Cuestionario

STUDENT PRE-PARE 2015.

The purpose of this study is to learn how medical students in Europe are taught about antibiotic prescribing and using antibiotics appropriately ('prudent antibiotic prescribing'). We greatly appreciate your completion of the survey. The results will be used to suggest improvements to existing curricula, and will be published in national and international peer-reviewed journals. The survey should take five to ten minutes to complete, please try to answer all questions. All responses are anonymous and will be stored confidentially.

1. How old are you (in years)
2. What is your sex?
 - a. Male
 - b. Female
3. Are you a citizen in the country in which you are studying medicine?
 - a. Yes.
 - b. No (please write the country you are a citizen in)
4. Will you complete your medical studies before the end of February 2016?
 - a. Yes
 - b. No
 - c. Other (please specify)
5. What is the full duration of your medical training in your medical school?
 - a. 4 years
 - b. 5 years
 - c. 5,5 years/11 semesters
 - d. 6 years
 - e. 7 years
 - f. Other (please specify)

6. Which medical school are you studying at? (medical schools are listed under each country, in alphabetic order).

a. Other (please specify)

Please note that this is the longest section of the survey.

This section asks how well you feel your studies at medical school have prepared you for your practice as a junior doctor on the following topics of prudent antibiotic use (including all courses, lectures, clinical placements, training at the bedside, exams, and self-directed learning).

For each question, please respond "I feel... (1 = not at all prepared, 4 = sufficiently prepared, 7 = very well prepared) to...".

If there are questions where you have not had any teaching, please select the 'no teaching provided', irrespective of how well prepared you feel on this topic.

7. Diagnosis of infection I feel...	No teaching was provided	1 (Not at all prepared)	2	3	4 (Sufficiently prepared)	5	6	7 (Very well prepared)	I am unsure how I feel	I do not understand the question
To recognise the clinical signs of infection	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
To assess the clinical severity of infection (e.g using criteria, such as the septic shock criteria)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
To use point-of-care tests (e.g. urine dipstick, rapid diagnostic tests for streptococcal pharyngitis)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
To interpret biochemical markers of inflammation (e.g. CRP)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
To decide when it is important to take microbiological samples before starting antibiotic therapy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
To interpret basic microbiological investigations (e.g. blood cultures, antibiotic susceptibility reporting)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

8. Indications for no antibiotic treatment I feel...	No teaching was provided	1 (Not at all prepared)	2	3	4 (Sufficiently prepared)	5	6	7 (Very well prepared)	I am unsure how I feel	I do not understand the question
To identify clinical situations when not to prescribe an antibiotic	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
To differentiate between bacterial colonisation and infection (e.g. asymptomatic bacteriuria)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

To differentiate between bacterial and viral upper respiratory tract infections	0	0	0	0	0	0	0	0	0	0
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9. Initial antibiotic therapy I feel...	No teaching was provided	1 (Not at all prepared)	2	3	4 (Sufficiently prepared)	5	6	7 (Very well prepared)	I am unsure how I feel	I do not understand the question
To select initial empirical therapy based on the most likely pathogen(s) and antibiotic resistance patterns, without using guidelines	0	0	0	0	0	0	0	0	0	0
To decide the urgency of antibiotic administration in different situations (e.g <1 hr for severe sepsis, non-urgent for chronic bone infections)	0	0	0	0	0	0	0	0	0	0
To prescribe antibiotic therapy according to national/local guidelines	0	0	0	0	0	0	0	0	0	0
To assess antibiotic allergies (e.g. differentiating between anaphylaxis and hypersensitivity)	0	0	0	0	0	0	0	0	0	0
To identify indications for combination antibiotic therapy	0	0	0	0	0	0	0	0	0	0
To decide the shortest possible adequate duration of antibiotic therapy for a specific infection	0	0	0	0	0	0	0	0	0	0
To prescribe using principles of surgical antibiotic prophylaxis	0	0	0	0	0	0	0	0	0	0

10. Reassessment of antibiotic therapy I feel...	No teaching was provided	1 (Not at all prepared)	2	3	4 (Sufficiently prepared)	5	6	7 (Very well prepared)	I am unsure how I feel	I do not understand the question
To review the need to continue or change antibiotic therapy after 48-72 hours, based on clinical evolution and laboratory results	0	0	0	0	0	0	0	0	0	0
To assess clinical outcomes and possible reasons for failure of antibiotic treatment	0	0	0	0	0	0	0	0	0	0
To decide when to switch from intravenous (IV) to oral antibiotic therapy	0	0	0	0	0	0	0	0	0	0

11. Quality of care I feel...	No teaching was provided	1 (Not at all prepared)	2	3	4 (Sufficiently prepared)	5	6	7 (Very well prepared)	I am unsure how I feel	I do not understand the question
To measure/audit antibiotic use in a clinical setting, and to interpret the results of such studies	O	O	O	O	O	O	O	O	O	O
To work within the multidisciplinary team in managing antibiotic use in hospitals	O	O	O	O	O	O	O	O	O	O

12. Communication skills I feel...	No teaching was provided	1 (Not at all prepared)	2	3	4 (Sufficiently prepared)	5	6	7 (Very well prepared)	I am unsure how I feel	I do not understand the question
To measure/audit antibiotic use in a clinical setting, and to interpret the results of such studies	O	O	O	O	O	O	O	O	O	O
To work within the multidisciplinary team in managing antibiotic use in hospitals	O	O	O	O	O	O	O	O	O	O

13. Antibiotic resistance. I feel...	No teaching was provided	1 (Not at all prepared)	2	3	4 (Sufficiently prepared)	5	6	7 (Very well prepared)	I am unsure how I feel	I do not understand the question
To use knowledge of the common mechanisms of antibiotic resistance in pathogens	O	O	O	O	O	O	O	O	O	O
To use knowledge of the epidemiology of bacterial resistance, including local/regional variations	O	O	O	O	O	O	O	O	O	O
To practise effective Infection control and hygiene (to prevent spread of bacteria)	O	O	O	O	O	O	O	O	O	O
To use knowledge of the negative consequences of antibiotic use (bacterial resistance, toxic/adverse effects, cost, Clostridium difficile infections)	O	O	O	O	O	O	O	O	O	O

14. Which of the following methods have been used at your medical school for teaching about prudent antibiotic use (the topics from the previous set of questions), and how useful were they?

	Teaching method was not used	Not at all useful	Neutral	Useful	Very useful	I'm unsure	I do not understand the question
Lectures (with > 15 people)	☐	☐	☐	☐	☐	☐	☐
Small group teaching (with <15 people)	☐	☐	☐	☐	☐	☐	☐
Discussions of clinical cases and vignettes	☐	☐	☐	☐	☐	☐	☐
Active learning assignments (e.g. article reading, group work, preparing an oral presentation)	☐	☐	☐	☐	☐	☐	☐
E-learning	☐	☐	☐	☐	☐	☐	☐
Role play or communication skills sessions dealing with patients demanding antibiotic therapy	☐	☐	☐	☐	☐	☐	☐
Infectious diseases clinical placement (i.e. clinical rotation or training in infectious diseases, involving patients)	☐	☐	☐	☐	☐	☐	☐
Microbiology clinical placement	☐	☐	☐	☐	☐	☐	☐
Peer or near-peer teaching (i.e. teaching led by other students, or recently qualified doctors)	☐	☐	☐	☐	☐	☐	☐

15. Overall, do you feel you have received sufficient teaching at medical school in antibiotic use for your future practice as a junior doctor?

- a. Yes
- b. No, I feel I had enough on general antibiotic treatment, but I need more on prudent antibiotic use.
- c. No, I feel I need more education on both general antibiotic treatment and prudent antibiotic use.
- d. I am unsure

16. Have any of your medical school examinations included questions on antibiotic treatment?

- a. Yes.
- b. No.
- c. Unsure.
- d. Other (please specify)

17. How do you think teaching on antibiotic treatment and prudent antibiotic use can be improved.

18. How did you find the language used in this study?

- a. I could understand everything or almost everything.
- b. I could understand most questions, It was alright for the survey to be in English.
- c. Many questions were difficult to understand, I would have preferred the survey in my native language.
- d. Most of the survey was difficult to understand, I would have preferred the survey in my native language.
- e. Other (please specify)