

# The effectiveness of an antimicrobial resistance online module on knowledge among dental students

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<b>Registration date</b> 25/10/2018	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 01/03/2021	<b>Condition category</b> Other	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

The World Health Organization (WHO) has recognised antimicrobial resistance (AMR) as one of the greatest threat to human health. WHO defined AMR as the potential of microorganisms to gain the ability to resist antimicrobial agents. This study aims to assess the effectiveness of an online module about AMR on the knowledge of this topic among dental students.

### Who can participate?

Dental students from Umm Al-Qura University

### What does the study involve?

Participants will be randomly allocated to either the study group or the control group. Participants in the study group will receive a 9 minute online course providing information about AMR. The control group will receive a 5 minute online course regarding the microorganisms and normal flora of the oral cavity, with no information about AMR. All participants will be asked to complete the same questionnaire before the course, immediately after the course and then again after 2 months.

### What are the possible benefits and risks of participating?

The possible benefit of participating is that this study may help the community to become more aware of antimicrobial drugs, their misuse and the consequences of this. Participants will also be entered into a prize draw for a 200 SR bookstore voucher. There are no known risks to participants taking part in this study.

### Where is the study run from?

Umm Al-Qura University (Saudi Arabia)

### When is the study starting and how long is it expected to run for?

October 2017 to April 2018

Who is funding the study?  
Investigator initiated and funded

Who is the main contact?  
Dr Khalid Aboalshamat  
ktaboalshamat@uqu.edu.sa

## Contact information

**Type(s)**  
Scientific

**Contact name**  
Dr Khalid Aboalshamat

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### Contact details

-  
Makkah  
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21955

## Additional identifiers

**Protocol serial number**  
77-17

## Study information

**Scientific Title**  
The effectiveness of an online course intervention to improve the knowledge of antimicrobial resistance among dental students in comparison to a placebo intervention

**Acronym**  
Superbug

**Study objectives**  
Are there any benefits from using online modules to enhance the knowledge of antimicrobial resistance among dental students?

**Ethics approval required**  
Old ethics approval format

**Ethics approval(s)**  
Umm Al-Qura University Faculty of Dentistry, 20/12/2017, ref: 77-17

**Primary study design**

Interventional

### **Study design**

Interventional triple-blind randomised controlled trial

### **Study type(s)**

Other

### **Health condition(s) or problem(s) studied**

Knowledge of antimicrobial resistance

### **Interventions**

The students were randomised into the study group or to the active control group. Students in the study group, received a link on their mobile phone to the study consent form and baseline questionnaire (T1), which then followed on to the intervention online course. This online course consisted of auto played 35 slides with an accompanying audio for nine minutes. The course explained definition of antimicrobial resistance (AMR), types of antibiotic action, how AMR develops, causes of AMR, the role of dentists in reducing AMR, and when to prescribe an antibiotic as a dentist. After this, the participants were asked to answer the post intervention questionnaire (T2). The participants were followed up with the same questionnaire after one month of the intervention (T3). Each questionnaire took approximately 10-15 minutes. The intervention was not tailored to participants individually. However, the participants were free to take the intervention at their free time during the day of the intervention. The intervention online course information was derived from previous validated governmental and scientific references, and then confirmed by dental consultants.

The participants in the active control group followed the same process, but they received a different course composed of 34 slides given in 5 minutes. This contained information about microorganisms in dentistry, including the definition of normal flora, types of normal flora, common habitats of human microbial flora, changes of the oral flora throughout life, the benefit of resident flora, disadvantages of the oral flora and factors modulating growth of bacteria in the oral cavity. Information about AMR was not included in the online course for this group.

### **Intervention Type**

Other

### **Primary outcome(s)**

Knowledge of dental students about antimicrobial resistance, assessed using the study questionnaires at the baseline, end of the intervention and at the 2 month follow-up. Changes in this will be assessed from:

1. T1 to T2 (baseline to end of the intervention)
2. T2 to T3 (end of the intervention to 2 month follow-up)
3. T1 to T3 (baseline to 2 month follow-up)

### **Key secondary outcome(s)**

N/A

### **Completion date**

21/04/2018

## **Eligibility**

**Key inclusion criteria**

1. Students of Umm Al-Qura University
2. Dental students (4th, 5th, and 6th years)
3. Submitted an online informed consent to participate in the study

**Participant type(s)**

Health professional

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Total final enrolment**

64

**Key exclusion criteria**

Does not meet inclusion criteria

**Date of first enrolment**

15/01/2018

**Date of final enrolment**

20/01/2018

**Locations****Countries of recruitment**

Saudi Arabia

**Study participating centre**

Umm Al-Qura University

Makkah

Saudi Arabia

21955

**Sponsor information****Organisation**

Umm Al-Qura University

ROR

<https://ror.org/01xjqrm90>

## Funder(s)

### Funder type

Other

### Funder Name

Investigator initiated and funded

## Results and Publications

### Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are not expected to be made available, as the data can be verified for only validity purposes if required by an authority has the right to check our result upon request from the main author Dr. Khalid Aboalshamat. The data is quantitative data and will be stored in Dr. Khalid Aboalshamat's office in Umm Al-Qura University for two years. The data can be accessed by the research team only. All data was taken from the participants after signing an electronic consent to use their data for the purpose of this study only.

### IPD sharing plan summary

Not expected to be made available

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	10/08/2019	06/07/2020	Yes	No
<a href="#">Basic results</a>		16/10/2018	24/04/2019	No	No