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

Submission date
07/10/2018

Recruitment status
No longer recruiting

Registration date
25/10/2018

Overall study status
Completed

Last Edited
01/03/2021

Condition category
Other

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] 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
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Contact information

Type(s)
Scientific

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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

Study design

Interventional triple-blind randomised controlled trial

Primary study design
Interventional

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?
Results article	results	10/08/2019	06/07/2020	Yes	No
Basic results		16/10/2018	24/04/2019	No	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes