# Scopus

## **Documents**

Ang,  $C.Y.^a$ , Dhaliwal,  $J.S.^a$ , Muharram,  $S.H.^a$ , Akkawi,  $M.E.^b$ , Hussain,  $Z.^c$ , Rahman,  $H.^a$ , Kok,  $Y.Y.^a$ , Dhaliwal,  $S.K.S.^a$ , Ming,  $L.C.^a$ 

Educational resource for antimicrobial resistance and stewardship for dentistry programmes: A research protocol (2021) BMJ Open, 11 (7), art. no. e048609, .

DOI: 10.1136/bmjopen-2021-048609

- <sup>a</sup> Pengiran Anak Puteri Rashidah sa'Adatul Bolkiah Institute of Health Sciences, Universiti Brunei Darussalam (UBD), Gadong, Brunei Darussalam
- <sup>b</sup> Kulliyyah of Pharmacy, International Islamic University, Kuantan Campus, Kuantan, Malaysia
- <sup>c</sup> University of Canberra, Canberra, ACT, Australia

#### **Abstract**

Introduction Antimicrobial resistance (AMR) is a global public and patient safety issue. With the high AMR risk, ensuring that the next generation of dentists that have optimal knowledge and confidence in the area of AMR is crucial. A systematic approach is vital to design an AMR content that is comprehensive and clinically relevant. The primary objective of this research study will be to implement a consensus-based approach to elucidate AMR content and curriculum priorities for professional dentistry programmes. This research aims to establish consensus along with eliciting opinion on appropriate AMR topics to be covered in the Bachelor of Dental Surgery syllabus. Methods and analysis A three-phase approach to validate content for curriculum guidelines on AMR will be adopted. First, literature review and content analysis were conducted to find out the available pertinent literature in dentistry programmes. A total of 23 potential literature have been chosen for inclusion within this study following literature review and analysis in phase 1. The materials found will be used to draft curriculum on antimicrobials for dentistry programmes. The next phase involves the validation of the drafted curriculum content by recruiting local and foreign experts via a survey questionnaire. Finally, Delphi technique will be conducted to obtain consensus on the important or controversial modifications to the revised curriculum. Ethics and dissemination An ethics application is currently under review with the Institute of Health Science Research Ethics Committee, Universiti Brunei Darussalam. All participants are required to provide a written consent form. Findings will be used to identify significant knowledge gaps on AMR aspect in a way that results in lasting change in clinical practice. Moreover, AMR content priorities related to dentistry clinical practice will be determined in order to develop need-based educational resource on microbes, hygiene and prudent antimicrobial use for dentistry programmes. © Author(s) (or their employer(s)) 2021. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

# **Author Keywords**

infection control; infectious diseases; medical education & training; microbiology; oral medicine

#### **Funding details**

Universiti Brunei DarussalamUBD

Authors would like to thank Mr Awangku Muhammad Adi Marhain Bin Pengiran Haji Mohamad Yusra for his support in ethical application documentation.

This study was funded by Universiti Brunei Darussalam, publication fee

## References

- Hu, X.-Y., Logue, M., Robinson, N.
   Antimicrobial resistance is a global problem-A UK perspective (2020) Eur J Integr Med, 36, p. 101136.
- Courtenay, M., Lim, R., Castro-Sanchez, E.
   Development of consensus-based national antimicrobial stewardship competencies for UK undergraduate healthcare professional education (2018) J Hosp Infect, 100, pp. 245-256.

1 of 4 7/22/2021, 2:50 PM

 Venter, H., Henningsen, M.L., Begg, S.L. Antimicrobial resistance in healthcare, agriculture and the environment: The biochemistry behind the headlines (2017) Essays Biochem, 61, pp. 1-10.

 Shahpawee, N.S., Chaw, L.L., Muharram, S.H. University students' antibiotic use and knowledge of antimicrobial resistance: What are the common myths?

(2020) Antibiotics, 9.

[Epub ahead of print: 20 Jun 2020]

- Silverberg, S.L., Zannella, V.E., Countryman, D. A review of antimicrobial stewardship training in medical education (2017) J Med Educ, 8, pp. 353-374.
- Dellit, T.H., Owens, R.C., McGowan, J.E. Infectious diseases Society of America and the Society for healthcare epidemiology of America guidelines for developing an institutional program to enhance antimicrobial stewardship (2007) Clin Infect Dis, 44, pp. 159-177.
- Roumie, C.L., Halasa, N.B., Edwards, K.M. Differences in antibiotic prescribing among physicians, residents, and nonphysician clinicians (2005) Am J Med, 118, pp. 641-648.
- Pet Al, D. Interventions to improve antibiotic prescribing practices for hospital inpatients (2005) Cochrane Database Syst Rev, 4, p. Cd003543.
- Pulcini, C., Wencker, F., Frimodt-Møller, N. European survey on principles of prudent antibiotic prescribing teaching in undergraduate students (2015) Clin Microbiol Infect, 21, pp. 354-361.
- Pulcini, C., Williams, F., Molinari, N. Junior doctors' knowledge and perceptions of antibiotic resistance and prescribing: A survey in France and Scotland (2011) Clin Microbiol Infect, 17, pp. 80-87.
- Howard, P., Pulcini, C., Levy Hara, G. An international cross-sectional survey of antimicrobial stewardship programmes in hospitals (2015) J Antimicrob Chemother, 70, pp. 1245-1255.
- Pulcini, C., Cua, E., Lieutier, F. Antibiotic misuse: A prospective clinical audit in a French university hospital (2007) Eur J Clin Microbiol Infect Dis, 26, pp. 277-280.
- Zarb, P., Coignard, B., Griskeviciene, J. The European Centre for Disease Prevention and Control (ECDC) pilot point prevalence survey of healthcare-associated infections and antimicrobial use (2012) Euro Surveill, 17. [Epub ahead of print: 15 Nov 2012]

2 of 4 7/22/2021, 2:50 PM

- Rawson, T.M., Moore, L.S.P., Gilchrist, M.J.
   Antimicrobial stewardship: Are we failing in cross-specialty clinical engagement?
   (2016) J Antimicrob Chemother, 71, pp. 554-559.
- Teoh, L., Thompson, W., Suda, K.
   Antimicrobial stewardship in dental practice (2020) J Am Dent Assoc, 151, pp. 589-595.
- Oberoi, S.S., Dhingra, C., Sharma, G.
   Antibiotics in dental practice: How justified are we (2015) Dent J, 65, pp. 4-10.
- Gross, A.E., Suda, K.J., Zhou, J.
   Serious antibiotic-related adverse effects following unnecessary dental prophylaxis in the United States
   (2021) Infect Control Hosp Epidemiol, 42, pp. 110-112.
- Castro-Sánchez, E., Drumright, L.N., Gharbi, M.
   Mapping antimicrobial stewardship in undergraduate medical, dental, pharmacy, nursing and veterinary education in the United Kingdom

   (2016) PLoS One, 11.
- Rawson, T.M., Butters, T.P., Moore, L.S.P.
   Exploring the coverage of antimicrobial stewardship across UK clinical postgraduate training curricula
   (2016) J Antimicrob Chemother, 71, pp. 3284-3292.
- Lomazzi, M., Moore, M., Johnson, A.
   Antimicrobial resistance-moving forward?
   (2019) Bmc Public Health, 19, p. 858.
- Dyar, O.J., Howard, P., Nathwani, D.
   Knowledge, attitudes, and beliefs of French medical students about antibiotic prescribing and resistance
   (2013) Med Mal Infect, 43, pp. 423-430.
- Abbo, L.M., Cosgrove, S.E., Pottinger, P.S.
   Medical students' perceptions and knowledge about antimicrobial stewardship: How are we educating our future prescribers?
   (2013) Clin Infect Dis, 57, pp. 631-638.
- Cumyn, A., Harris, I.B.
   A comprehensive process of content validation of curriculum consensus guidelines for a medical specialty
   (2012) Med Teach, 34, pp. e566-e572.

### **Correspondence Address**

Dhaliwal S.K.S.; Pengiran Anak Puteri Rashidah sa'Adatul Bolkiah Institute of Health Sciences, Brunei Darussalam; email: jagjit.dhaliwal@ubd.edu.bn

Publisher: BMJ Publishing Group

**ISSN:** 20446055

**Language of Original Document:** English **Abbreviated Source Title:** BMJ Open 2-s2.0-85109567427

**Document Type:** Article **Publication Stage:** Final

Source: Scopus

**ELSEVIER** 

Copyright © 2021 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

**RELX** Group™

4 of 4