



Global Health Bytes webinar

Wednesday 17 March 2021, 4.00-4.30 pm NZ time

Dunedin: Room AVC2, Disability Information & Support, Student Learning Centre Offices
(Central Library/Information Services Building), Albany Street

Remote participation by Zoom:

<https://otago.zoom.us/j/486443663?pwd=WGgyUkEyQm13djIPRDRhWFVmWUZZUT09</h4>>

Password: 303183

An Undetected Outbreak of Carbapenem-resistant *Acinetobacter baumannii* within the Tupua Tamasese Mea'ole Hospital linked to Middlemore Hospital

Ms Lupeoletalalelei Isaia, University of Otago

Carbapenem-resistant *Acinetobacter baumannii* (CR-Ab) is a critical pathogen that has become increasingly prevalent in clinical settings and difficult to treat due to its multidrug resistance (MDR). Using whole-genome sequencing (WGS), we report an undetected and prolonged outbreak of CR-Ab within the Tupua Tamasese Mea'ole Hospital (TTMH) in Samoa. 25 CR-Ab were collected between November 2017 and January 2020, from the TTMH Laboratory and from Middlemore Hospital (MMH) in New Zealand. Samples were isolated from blood, wound swabs, urine, sputum and screening swabs. All isolates belonged to sequence type (ST) 1050, and carbapenem resistance was due to acquired class D carbapenemase blaOXA-23 in addition to the intrinsic blaOXA-66. We demonstrated minimal genetic diversification between isolates, with ≤ 9 single nucleotide polymorphisms (SNPs) differences in the core genome from the earliest case (WS003, November 2017 from TTMH). Two isolates from patients in emergency and two from Intensive Care were identical having no SNP differences over 10 months, suggesting CR-Ab may not be limited to the hospital settings. Carriage of CR-Ab ST1050 was observed in two isolates from MMH, which varied from WS003 by 5 (January-2020) and 7 SNPs (February-2019) respectively. These results show clear linkages of CR-Ab strains from Samoa to MMH in New Zealand. Furthermore, CR-Ab isolates from Samoa shared a common ancestor with CR-Ab strains isolated from a Brisbane Hospital outbreak that started in 2016 and continued until 2018. All CR-Ab isolates from Samoa differed by ≤ 14 SNPs when compared to the index patient from the outbreak in Brisbane.

These results are critical in informing infection control practises to prevent further spread of this critical pathogen within TTMH and within the Pacific.

Lupe Isaia is a PhD Student in the Centre for International Health, Department of Preventive and Social Medicine (DSM), University of Otago.

Instructions for attendees

You will need Internet access as well as speakers on your computer. Each Global Health Bytes webinar will be approximately ½ hour in duration.

1. To join a webinar:

Click on the Zoom link from PC, Mac, iOS or Android:

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Password: 303183

The guest speaker will present their talk, and you will be able to ask questions using the *Chat* function in Zoom. The speaker will respond to questions either verbally, or using Chat. *Please note - this is a webinar and you will not be able to turn your video or microphone on, you are welcome to send questions and chat messages instead.*

2. Using the Chat

1. Attendees will ask questions using the Chat function. In your controls at the bottom window, click **Chat**.

The *Chat* window will open on the right side of your screen if you are not in full screen mode. If you are full screen mode, it will open in a window that you can move around your screen. *Chat* will be in the controls at the bottom of your screen.

3. Type your message and press **Enter** to send it.
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The meeting will be recorded and available through OGHl (web and Facebook links will be posted). It will be part of an archive of meetings which can be accessed via the web. By participating in the *OGHI Global Health Bytes*, you agree to the webinar being recorded and available online.

For any questions or help with Zoom, please contact eConferencing on econferencing@otago.ac.nz or call +64 3 479 8440 during normal work hours (8:30am – 5:00pm NZ time)