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P3-04: EXPEDITING CAMPUS COVID-19 MASS SCREENING

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Background: Towards Good Friday 2021, COVID-19 cases among students staying at the Universiti Malaysia Sabah (UMS) on-campus residential colleges began to increase and eventually forming a cluster. Consequently, the entire campus was subjected to two phases of the stricter Malaysian lockdown order called the Enhanced Movement Control Order (EMCO) in the period 5 April 2021 - 2 May 2021. The UMS EMCO affected approximately 3,600 students.

Description: The EMCO included among others COVID-19 testing towards all the affected residents in each EMCO phase, which last for a period of 14 days. The EMCO will be extended for another 14 days until no more new cases are detected. In Phase 2 of the UMS EMCO, the UMS COVID-19 Diagnostic Laboratory was tasked to complete testing approximately 2,800 samples in less than four days, to be in time for the local authority to decide if the UMS EMCO was to be extended. To help expedite the COVID-19 RT-PCR testing of these samples, instead of packing the sample tubes individually in smaller biohazard bags, we arranged 30~40 tubes per wire rack, then packed each rack in a large biohazard bag before finally packing in Styrofoam boxes containing ice pack. The small modification to the standard specimen packaging procedures helped saved an estimated 15 hours of testing time in the laboratory and Malaysian Ringgit 1,800 (USD500) in cost.

Lessons Learned: Minor modification to standard procedures based on rapid rational biosafety and biorisk assessment approach, coupled with clear communications of the modifications to the entire team could help reduce workload and save resources during critical public health crisis such as the COVID-19 pandemic.

Conclusions/Next Steps: Learning and understanding how to conduct rapid rational biosafety and biorisk assessment is a useful tool to further enhance disease outbreak preparedness and response.

SEAOHUN 2022 International Conference

Program and Book of Abstracts

5 – 7 September 2022
Grand Richmond Hotel, Thailand

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Expediting Campus COVID-19 Mass Screening

Modified Specimen Packaging & Transportation



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Enhanced Movement Control Order!!

Authorities expands EMCO to entire UMS campus

By Olivia Miwil - April 5, 2021 @ 9:01pm



EMCO in UMS, Kota Kinabalu extended



By Mohamed Basyir - April 17, 2021 @ 8:38pm



**Students!
Parents!!**



Malaysian MOH Triple Layer Packaging

Modified Method

**FAST!?
SAFE!?**



Reduced sample sorting time in the lab

1. No individual small biohazard bags to remove
2. Preliminary sorting can be done at sampling site
3. Minimize leakage risk - tubes packed and transported upright

Estimated time saved on removal of small biohazard bags:

100 samples x ~0.25 min/bag
= 25 min/100 samples

~15 H

(3,596 samples x ~0.25 min/bag = 899 min)



Small biohazard bags

Estimated cost saved:

100 samples x ~RM0.50/bag
= RM50/100 samples

~RM1,798

(3,596 samples x ~RM0.50/bag)



3,596

samples processed during UMS-EMCO (05.04.2021 - 02.05.2021)

SAVINGS

Bic Mac Index by Country

USD\$400 = # of Bic Mac

- 170 🇲🇾
- 163 🇲🇸
- 145 🇵🇭
- 135 🇻🇳
- 114 🇹🇼
- 86 🇳🇿
- 77 🇺🇸
- 0 🇲🇦

Minor modifications to SOP can help get more Big Macs!



Conduct rapid rational biosafety and biorisk assessment!

