

UMS develops app for returning students

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KOTA KINABALU: A group of lecturers from the Faculty of Medicine and Health Sciences (FMHS) and Faculty of Computing and Informatics (FCI), Universiti Malaysia Sabah (UMS), developed a web application as a step towards preventing the spread of Covid-19 at the university.



UMS Vice-Chancellor Professor Datuk Dr Taufiq Yap Yun Hin welcomed the effort to ensure the welfare and well-being of UMS students during the pandemic that hit the country since March.

"The use of this application has to be optimised to curb Covid-19 transmission at UMS by embedding a variety of functions into the application," he said.

He noted that following a directive issued by the National Security Council that allowed movements across the State starting April 29, UMS took the initiative to plan health screenings for nearly 6,000 students at all university residential colleges across Kota Kinabalu, Sandakan and Labuan.

"This health screening is essential to ensure that students who are allowed to return home are free from Covid-19 infection and at low risk of infecting others," Dr Taufiq said.

Meanwhile, Senior Medical Lecturer from FMHS, Dr Fatimah Ahmedy (pic), who led the project, said the application, called "UMS-Shields" is an innovation built for UMS students.

"It is a system for empowerment and disease surveillance based on the concept of 'Smart Health' with embedded artificial intelligence (AI) technology.

"UMS-Shields has three specialised modules that incorporate health screening instrument including the status of



laboratory results such as polymerase chain reaction test as a requirement for permitting students to exit UMS, risk assessment instrument for determining the probability of infected with Covid-19 as a means to curb the outbreak at the university, and health monitoring instrument for those classified as high risk including the person under investigation (PUI) or a person under surveillance (PUS)," she said.

Dr Fatimah also emphasised that the use of UMS-Shields application would facilitate the health screening process where students are to conduct self-assessments through the application with health care staff to screen students' temperature and swab sampling.

She added that the medical team would further examine students at high risk of Covid-19 infection and quarantine if necessary, under UMS' University Health Centre standard operating procedure.

"Health monitoring throughout the quarantine period is to be conducted through the UMS-Shields that emphasises on assessing the progress of physical and

mental health.

"Although the UMS health mobility team does daily health monitoring, the system would be able to detect early deterioration in health due to real-time monitoring, and therefore, early intervention can be delivered to prevent unwanted complications, including problems with the respiratory system and excessive anxiety.

"The integrated tracking system would enhance compliance throughout the quarantine period," she said.

Dr Fatimah noted that in addition to screening and health monitoring instruments, UMS-Shields would serve as a platform for UMS to assess the risk of contracting Covid-19 among students once the university reopens.

"UMS will emphasise on early risk assessment to detect and isolate high-risk individuals so that the probability of spread through community transmission among university students is kept minimal," she said.

This application development project has the full support of the UMS Research & Innovation Center in line with the encouragement from the Deputy Vice-Chancellor of Research and Innovation, Associate Prof Dr Ramzah Dambul that is expecting more UMS lecturers to conduct research and innovation which are relevant to the Covid-19 pandemic.

Among the lecturers involved in the project were FMHS Dean Professor Dr Mohammad Saffree Jeffree, Associate Prof Dr Richard Avoi, Associate Prof Dr Syed Sharizman Syed Abdul Rahim and Dr Nicholas Pang from FMHS, and in collaboration with data science lecturer from FCI, Associate Prof Dr Mohd Hanafi Ahmad Hijaz and technical team from the UMS Data and Information Management Center.