

UGM RSA Launches GAMA Swab Booth

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Director of the UGM Academic Hospital (RSA), dr. Arief Budiyanto, Ph.D., Sp.KK (K)., launched the GAMA Swab Sampling Booth. GAMA Swab Sampling Booth is a booth for taking swab tests for those suspected of being exposed to the Coronavirus.

Arief Budiyanto is grateful to be able to own and launch a swab booth. The presence of this swab booth is hopefully able to reduce the growing need due to demands for Covid-19 diagnoses.

"Government stated that we still lack Covid-19 diagnosis capacity." As an illustration in Jogja, one month ago, there was only one PCR, Polymerase Chain Reaction, or swab test that is according to the standards related to Covid-19," he said at UGM RSA on Monday (27/4).

With the concept of a drive-thru and mobile services, the GAMA Swab Sampling Booth is hopefully able to streamline time and place, as well as minimize the hospital's red zone over the distribution of Covid-19. Patients undergoing swab sampling are patients who have previously experienced an examination with a doctor and then classified as ODP (People in Care) / PDP (Patients in Care) and People without Symptoms (OTG).



"Many people did not have a chance to get this facility in the past because of limited tools. Hence, some people had to queue up. Now with this tool, we can improve the capacity of swab checks, especially for PDP, outpatient ODP, and OTG. Even though there were more people tested, we hope that many people would have a negative test result," he added.

Arief said that many hospitals serving Covid-19 currently faced the same problem, which is nothing but the lack of PPE (Personal Protective Equipment). Therefore, RSA and its Pandaw Teams initiated to raise funds for Covid-19, including PPE donations.

Unfortunately, these stocks continue to be lacking, while many parties do not yet know when the Covid-19 pandemic outbreak will end. Hence, the production of the Swab Booth hopefully will save the use of PPE, especially for doing the sampling.

"Before there was a swab booth, swab sampling officers were required to use level three PPE, so now it is no longer enough to use low-level PPE. Therefore, we are grateful to FMIPA, Vocational School, and FKMK UGM. They have collaborated to develop this innovative tool, providing comfort and security without reducing the safety of both officers and patients. This situation is UGM's contribution to the Covid-19 effort," he said.

Head of the GAMA Swab Sampling Booth Research Team, Dr. R. Sumiharto, S.Si, M.Kom., stated that the idea of making this tool was based on the condition of the officers when they were going to take swab samples that were required to use multiple PPE. Refer to this condition; there was an idea on how to make a swab inspection system that is safer and more comfortable.

"I am from the Faculty of Mathematics and Natural Sciences, Instrumentation Electronics who knows something like this, then there is the Vocational School and FKMK team, so we make a booth with the design of the officer inside and the patient is also safe and comfortable outside," he explained.

Although it has been officially launched and used, Sumiharto promised to continue to make improvements to this tool based on the evaluation. He hopes that there will be inputs so that this swab booth can become a reliable tool.

"Thanks to the RSA team, they allowed us to develop this tool. There were only two booths produced, one unit for UGM RSA and another for Panembahan Senopati Hospital," he said.

Sumiharto claimed to produce a swab booth cost 25 million rupiah by taking ten days to process.

According to him, making the booth can be shortened if all the necessary materials are available.

Dr. dr. Hera Nirwati, M. Kes, Sp.MK added that currently, the Indonesian nation is facing a Covid-19 outbreak, one of which is needed is a diagnosis, and the recommended diagnosis is the detection of Coronavirus. This detection carried out by taking samples in the form of swabs taken from the nasopharynx and oropharynx.

"Because the Coronavirus transmitted through droplets, sampling must be done cautiously so that the virus is not transmitted everywhere. Then ideally, the sample is taken in a negative pressure room, and the officer uses complete personal protective equipment," she said.

Amid the scarcity of PPE and the limited space of negative pressure isolation both in hospitals and Covid-19 examination laboratory tests, innovation is needed so that they can continue to carry out swab tests without reducing the risk of possible exposure to the virus. Therefore, based on the experience of what happened in Wuhan China and Korea, this GAMA swab booth was made.

The GAMA Swab booth was designed by the sampling officer inside and the patient outside. Because the officers are inside of the booth, the booth is completed with a positive pressure room to protect them.

"With this positive pressure, if outside there is a droplet or contaminant from the patient, the sampling officer will remain protected so that the officer no longer needs to use level three PPE so that according to the concept, this tool can save PPE," he explained.

He explained that this tool uses a hepa filter that is air entering through the hepa filter with the ability to filter 0.3 micros with 99 percent efficiency. Under these conditions, the sampling officer will still be protected from the air from outside.

As for the patient, disinfectants are prepared with drainage so that when one patient continues with the next patient, there will be disinfection so that they will be safe. The booth is made of durable enough material, namely stainless steel aluminum frame, 0.5 cm, or five-millimeter acrylic wall, so it is strong enough, and the tool is weather resistant because it can be inside or outside the room.

"Indeed, the GAMA Swab booth is designed for mobile, and there are wheels that make it easy to move around, use it as needed. Inside the air, cooler is also provided for the convenience of officers, while for communication with patients outside the audio is provided, communication is expected to be smoothly plus adequate lighting," he added.

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