

## UGM Students Develop Heart Beat Recorder

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Medical students of Universitas Gadjah Mada have made an electronic stethoscope named as *Mediskop* (Medical Electronic Stethoscope) after they found it difficult to know the sounds of abnormal heart beat and lung sounds when they were learning midwifery practices. Different from regular stethoscopes, this can record heart beat and breathing of patient, even heart beat of embryo in pregnant mothers.

The students are Ayu Dwi Silvia Putri, Dionita Rani Karyono, and Imah Nur Chasanah, all nursing students, and Muhammad Fadhil Ainuri, Electrical Engineering student, and Abdullah Ibnu Hasan Electronics and Instrumentation student.

Ayu said initially their stethoscope was for education tools for students to know the abnormal sounds of heart beat and lung sounds of a patient. But in its development, the tool has been developed to confirm the diagnosis on a disease, moreover that the records can be repeated for further discussion among medical workers. "The result of the medical record can be a source for discussion among medical workers prior to a diagnosis," said Ayu Dwi Silvia Putri on Monday (13/6).

Ayu said *Mediskop* still uses ear piece, tube and chest piece of a regular stethoscope. It is also equipped with a mini box sized 7x3 cm<sup>2</sup> consisting of sound recorder, USB plugs, and extensions for

direct play. “Those who want to hear at the same time they only need to connect it to a speaker,” she said.

Imah Nur Chasanah said initially in their learning process they only relied on doctor’s observation using manual stethoscope. “Often during practices we only use phantoms,” she added.

Due to this difficulties in separating the normal and abnormal sounds of heart beat and lung sounds, an idea came up to make an electronic stethoscope. “We had difficulties in identifying what abnormal sounds really are. The Mediskop is, therefore, expected to be able to help students as well as medical workers at clinics or hospitals,” she said.

To make this tool costs Rp150 thousands. The tool cannot yet be produced in mass currently as it has yet to be developed further with monitors to display graphical data of heart beat and lung sound.

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