

**Medical**

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# Just press a button to save a life: Here's why this Anna University AED that speaks Tamil and Hindi is a revolution

This portable electronic device not only diagnoses life-threatening diseases but also speaks English, Tamil and Hindi



The project has sailed smoothly past the initial stages and is awaiting the grant for filing a patent and further industry testing (Pic: Express | Rakesh Kumar)

Remember how Daniel Craig's James Bond almost died in *Casino Royale* because someone poisoned his drink and how he was brought to life by sticking two pads on his chest? Well, the machine that brought 007 back to life is an AED or **Automated External Defibrillator** and our scientists have made one right here in Chennai. A three-member team of researchers from Madras Institute of Technology, Anna University — **Dr T Thyagarajan** (Principal Investigator), **Dr Sabitha Ramakrishnan** (Co-Principal Investigator) and **G Anand** (Research Scholar) of the Department of Instrumentation Engineering — has developed an AED that's probably the first in India.

And the researchers tell us that their device is not just cost-effective but will also have multi-lingual prompts in Indian languages that can be automatically adjusted by a GPS-assisted system, will also aid in the delivery of the right amount of shock — depending upon the patient's impedance — and an option to store the procedure's details in a USB drive for further reference. "We should have AED at all major public places. But if we have the imported ones that currently exist in the market, the common man who might have to administer it to a dying patient might not know English or understand the foreign accent. Thus, the GPS has guided Indian language instructions. The device is very easy to use and anyone can operate it even without any medical training. All you need to do is switch on the button and follow the set of instructions," explains Dr Thyagarajan. The device currently has pre-installed commands in English, Tamil and Hindi.

As easy as it looks on TV, delivering a shock and defibrillating a patient is not the only task. The right amount of shock must be provided. "If we shock the patient with more electric current than required, it will bring him back to life but will also shorten his lifespan. If we shock him with less electric current, he will not survive. We need to know the exact charge," explains Dr Ramakrishnan, adding, "Our device measures the patient's impedance to determine how much electric current should be delivered. This is very important for the survival of the patient."

The project has sailed smoothly past the initial stages and is awaiting the grant for filing a patent and further industry testing. "It will take another two to three years at best for us to get it out in the market. But that is the time it takes to test these types of equipment," says Anand. The team also

has plans to use drones to deliver the AEDs to remote areas across India. Now that's one invention we'll be eagerly awaiting.

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