



Communication and Marketing Department
Isebe loThungelwano neNtengiso
Kommunikasie en Bemerkingsdepartement

Private Bag X3, Rondebosch 7701, South Africa
Welgelegen House, Chapel Road Extension, Rosebank, Cape Town
Tel: +27 (0) 21 650 5427/5428/5674 Fax: +27 (0) 21 650 5628

www.uct.ac.za

31 January 2019

New device developed to administer drugs via mobile messaging

A shared passion for improving healthcare in developing countries has led biomedical engineers from the University of Cape Town (UCT) and Osmania University, India to develop a tool for clinicians to administer medication to their patients remotely using mobile messaging technology.

Currently, a clinician or nurse must be present at a patient's bedside to administer intravenous medication manually. This can be especially challenging if they have various patients with different needs and medication schedules under their care.

Recognising the laborious and time-consuming nature of this task, Dr Sudesh Sivarasu – associate professor in biomedical engineering at UCT – partnered with Dr K Eshwar Chandra Vidya Sagar from the department of biomedical engineering at Osmania University in Hyderabad, India to develop a device that will automate and streamline the process through activation via mobile messaging.

The device – which can access a database of treatment plans for patients of a particular clinician – is programmed to send a mobile message to the clinician every time a patient requires drugs. By responding with an activation code, the clinician can instruct a receiver and automated system to communicate the activation instruction to intravenous pumps. These then administer the drugs, which have been preloaded and kept at a specific temperature.

Associate Professor Sivarasu explains: "This helps to prevent patients from experiencing unnecessary pain and discomfort while waiting for a clinician to come in to authorise and switch on the button. It is also far less time-consuming and cheaper – if you look at how much a clinician charges per hour."

He adds: "I think we can still do a lot of other things with this technology. But to begin with, it is a very basic drug administration system, and that alone holds a whole lot of opportunity."

In addition to facilitating the automated delivery of intravenous medication, the device can be adapted for data-driven medical homecare, especially for elderly and geriatric people, Associate Professor Sivarasu explains.

There are also plans to look into a simple potential application, like dosing insulin for diabetics in one major area. For this, Associate Professor Sivarasu explains that a clinician wouldn't even necessarily have to send a message to initiate the drug administration; they could give instructions for the drug delivery system to communicate directly to the patients' insulin pumps.

The researchers are currently investigating various routes to market and will most likely license the technology and then continue to develop it and do pre-clinical trials.

ENDS

Issued by: UCT Communication and Marketing Department

Angelique Botha

Media Liaison and Monitoring Assistant
Communication and Marketing Department
University of Cape Town
Rondebosch
Tel: +27 (21) 650 2583
Cell: +27 (64) 276 6234
Email: angelique.botha@uct.ac.za
Website: www.uct.ac.za