



Remote monitoring of Vital Signs of older persons in the community: a feasibility study

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Hypertension and Diabetes are now the most important chronic diseases creating huge demands on the healthcare system nowadays. Customarily, patients will record their Blood Pressure and Blood Sugar measurements and record them on a piece of paper to be handed to the doctors for review. However, most doctors will just glance through it and make casual comments only once in 2-3 months which is the typical duration of follow up by most practices.

Vital signs monitoring via remote cloud base systems have been established in many countries with varying success. The eHealth Consortium of Hong Kong partnered with the Applied Science & Technology Research Institute undertook a feasibility study in 2015 to assess the acceptance, adoption and feasibility of using such a system in the elderly citizens.

A total of 30 patients involving 6 general practitioners were recruited into the study. The patients uploaded a total of about 3000 data points in 3 months with daily blood pressure and some with daily blood glucose readings, via Bluetooth enabled devices and 3G mobile phone apps to the cloud server. The age of the patients ranged from 55 to 89. The data were analyzed with an algorithm built upon the European Society of Cardiology guidelines. A total of 1500 alert messages were sent to the patients, caregivers and the doctors.

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Two patients were immediately handled and drugs being changed because of the alert.

The patient satisfaction survey reviewed they gave exceptionally high acceptance value and they will certainly choose to continue using the system even with a low cost incurred.

In conclusion, Vital Signs monitoring remotely and analysis via computerized algorithm is found to be useful, acceptable and practical in the elderly patients.