IOT Based Process Model for Heart Monitoring Process

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Abstract : Connecting health services with technology has a huge demand as people health situations are becoming worse day by day. In fact, engaging new technologies such as Internet of Things (IOT) into the medical services can enhance the patient care services. Specifically, patients suffering from chronic diseases such as cardiac patients need a special care and monitoring. In reality, some efforts were previously taken to automate and improve the patient monitoring systems. However, the previous efforts have some limitations and lack the real-time feature needed for chronic kind of diseases. In this paper, an improved process model for patient monitoring system specialized for cardiac patients is presented. A survey was distributed and interviews were conducted to gather the needed requirements to improve the cardiac patient monitoring system. Business Process Model and Notation (BPMN) language was used to model the proposed process. In fact, the proposed system uses the IOT Technology to assist doctors to remotely monitor and follow-up with their heart patients in real-time. In order to validate the effectiveness of the proposed solution, simulation analysis was performed using Bizagi Modeler tool. Analysis results show performance improvements in the heart monitoring process. For the future, authors suggest enhancing the proposed system to cover all the chronic diseases.