

PROBLEM STATEMENT-7

Title : An IOT based smart bottle for health care

During recent years, due to technological advancements many sophisticated techniques have been evolved for ensuring fast recovery of the patients in hospitals. Need for good patient care in hospitals, assessment and management of fluid and electrolyte is the most fundamental thing required. Almost in all hospitals, an assistant/nurse is responsible for monitoring the electrolyte's bottle level. But unfortunately most of the time, the observer may forget to change the bottle at the correct time due to their busy schedule.

Objectives :

1. An IoT based automatic alerting and indicating device is proposed where sensor is used as a level sensor or weight sensor. It is based on the principle that the sensor output changes when fluid level/weight is below certain limit. When Fluid level/weight is low, will alerts the observer through the display or/and mobile phone at the control room indicates the room number of the patient for quick recovery Hospital uses simple electrolytes bottles with no indication, it may create a problem to patient because the reverse flow will start, blood start to flow from body towards bottle.
2. In, Hospital ICU, CCU, NICU, OPD, OT, most of all department of hospital required such kind of automatic monitoring and indication system. Also Healthcare industries will be one of the users. Such monitoring systems can be useful in small , medium and large sizes of hospitals and also useful during home care. Developing such a monitoring system will decrease the chances of patients hazards and increase the accuracy of health care in hospitals.

3. In the future we can design a readymade portable cover system for such a bottle. Ready mate Wearable sensors on the sides of the bottle can detect level/weight of-fluid inside bottles. Such data can also send to nurses and/or doctor`s mobile and they can start or stop the fluid and also monitoring fluid condition, such things required security password also. Hospital staff, the constant person requirement, to manually monitor the level of bottles is avoided. This is of high advantage to the patients especially during night times. This system also avoids the fatal risk of air bubbles entering the patient`s bloodstream, which is a serious threat as air bubbles in blood can cause immediate death. Such a device will create assurity of non-harm conditions to patients. and also helpful to monitoring of data and such data can be stored and will be useful in future.

Category : Hardware

Domain : Healthcare & Biomedical Devices

Technology Bucket :

- Internet of Things
- Desktop Application
- Android