

A Project Report on
**“DIGITAL MONITORING AND REGULATION OF
SALINE FLOW RATE USING MICROCONTROLLER”**
[Karnataka State Council for Science and Technology
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ABSTRACT

In the present era as the population is growing, the need for health care has increased. In recent years, progress in medical care has been rapid due to advancement in the field of sensors, microcontroller and computer. A major reason for this is convergence of the two important disciplines namely medicine and engineering. The lack of care of a person with sufficient skill in hospitals and their heavy duty have lead to problem of not monitoring the patient time to time .Thus we have to develop low cost automatic health monitoring systems for enhancement of hospital facility. Some of the existing automatic monitoring systems are blood pressure monitoring system, heart beat rate monitoring system etc.

At present the saline in present hospitals, the flow of the saline to the patient is controlled manually. By adjusting screw clamp i.e when that knob is rolled down the inside pipe gets pressed and the flow gets reduced drop by drop. Advancement of electronics in field of medical, has led to the necessity of automatic health monitoring systems. Sometimes this flow may stop due to certain conditions with respect to like bubbles in the flow pipe(catheter) and depending on the condition of the patient flow rate has to be increased or decreased and for this purpose the patient has to call the nurse every time to monitor the saline. Hence the automation of saline flow is required. In some medical applications the ability to conduct accurate flow rate control of saline flow rate is so important that inaccurate flow rate control or failure involves high risk. In the proposed work blood pressure sensor is used to monitor the blood pressure of the patient and according to this the saline flow rate is controlled using a module which includes arms controlled by servo motors instead of screw clamp. The objective of this work is to help life of a patient by developing automatic and cost effective saline monitoring system. This reduces continuous on-site monitoring by the doctor or nurse.