**Introduction to Study:** This study aims at objectifying the need of Drug Delivery Systems which is capable to deliver and control drug to a patient from a remote location.

Closed Loop Drug Delivery is modern Drug Delivery method to provide precise amount of dose and works on a feedback mechanism (Control Variable). The control variable is feedback as an input to the drug delivery algorithm that helps to calculate the accurate amount of drug as per the vital parameters of the patient. A number of basic components are required to develop satisfactory Closed Loop Drug Delivery system:

- A system under control, which is the patient
- A controlled variable that measures the relevant drug effect (Vital Signs)
- A set point, which is the selected target value specified by the user.

![Diagram of Closed Loop Drug Delivery System]

**Appendix-1 Questionnaire**
Any person filling this questionnaire would be assured of the confidentiality and the information will not be violated.

Name : 
Profile : 
Registration Number : 
Contact Number : 
Name of Organization/ Hospital : 

1 Currently which system do you use
   a) Automatic Drug Delivery System 
   b) Manual Drug Delivery System

(If your response is Manual Drug delivery then skip question no. 3)

2 Do you see the possibility of shifting from manual drug planning to an error free, automatic drug planning for controlling medication to admitted patient?
   a) Yes
   b) NO

(If your response is Automatic Drug delivery then)

3 Which method may be used to administer the pharmaceutical compound in human beings?
   a) Open Loop Drug Delivery
   b) Close Loop Drug Delivery

4 Would you prefer to use
   a) Automatic Drug Delivery System
b) Manual Drug Delivery System

5. In which system do you think doctor’s time is being used more effectively?
   a) Automatic Drug Delivery System
   b) Manual Drug Delivery System

6. In a post surgery scenario how would you like to control the analgesic agents?
   a) Automatically
   b) Manually

7. Would you give preference to a system that enables to check vital parameters of a patient even if you are in a remote location?
   a) Yes
   b) No

8. Do you want a drug delivery system that is capable of detecting and correcting errors related to dose and interval of administration to admitted patient?
   a) Yes
   b) No

9. According to you in which drug delivery system there is more accuracy?
   a) Automatic Drug Delivery System
   b) Manual Drug Delivery System

10. According to you in which drug delivery system is there more patient safety?
    a) Automatic Drug Delivery System
    b) Manual Drug Delivery System
11 According to you in which drug delivery system provides in time response of
the patient?
  a) Automatic Drug Delivery System  
  b) Manual Drug Delivery System 

12 In which particular chemical condition for admitted patient, would you
strongly recommend the use of automatic system for close loop drug delivery.

13 In which particular chemical condition for admitted patient, would you
strongly recommend the use of automatic system for open loop drug delivery
### Personal Details

#### Gender

- [ ] Male
- [ ] Female

#### Experience

- [ ] Less than 2 Years
- [ ] 3 to 8 years
- [ ] 9 to 14 years
- [ ] More than 14 years

#### Education

- [ ] MBBS
- [ ] MD
- [ ] MS
- [ ] Others_____________________

#### Age

- [ ] Less than 35
- [ ] 35 to 40
- [ ] 41 to 46
- [ ] More than 46