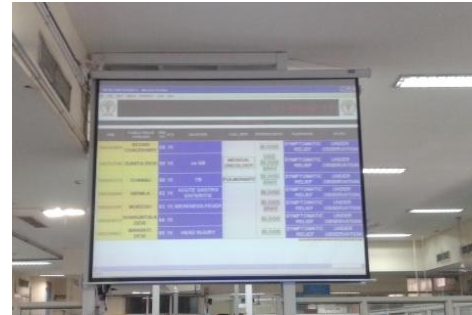# Patient Display System

INTRODUCTION

Emergency department of AIIMS caters to a patient load of about 400- 500 patients per day and the patients may be admitted in medical or surgical emergency. Due to the huge patient load the quality of care and communication between medical professionals and patient relatives were compromised.

Patient Display System (PDS) was introduced in the emergency department of AIIMS in April 2014 with an aim to optimize the workflow of emergency department thus improving the quality of care rendered to the patients. PDS is a continuously updated display screen that shows the subjective details and real time status of all patients admitted in the emergency department.
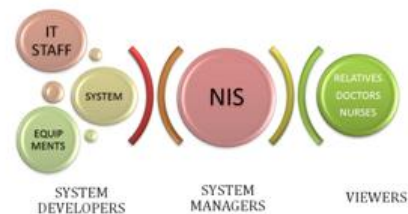
COMPONENTS OF PDS

1. System Developers

   The PDS is an innovative application of ICT in healthcare which is beneficial for relatives as well as medical professionals and is developed by the IT professionals with the support of Nursing Informatics Specialist.

2. System Managers

   The PDS is password protected software and the nursing informatics specialist posted in the Emergency department manages the system and enters the details of all patients visiting the emergency department. The data include UHID, patient name, age, sex,

Components of PDS

   diagnosis, bed no, status of patient, status of investigations, call sent for any consultation etc. Nursing informatics specialist also maintains the census of the patient and updates the system regularly.

3. Viewers

   The display is projected in the emergency department using large screens and the relatives and medical professionals get real time status of the patients admitted in the emergency.

FEATURES OF PDS

Display Screen

➢ Colour coded display screen enabling the medical professionals to get information regarding patients at one glance.

  ▪ Colour coding according to severity of patient condition- red , yellow, green.
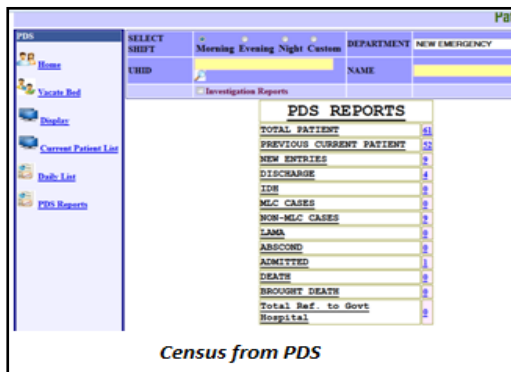 ▪ Consultation and investigation status-

pending in red and done in green.

➢ Direct view of lab reports and radiology images from the display screen.

➢ Shift wise census of emergency department.

➢ Provision to update duty rota of doctors and nurses assigned for patients.

➢ Provision to enter the consultation calls given to various departments.

➢ Consultation/ waiting time for each department auto calculated.

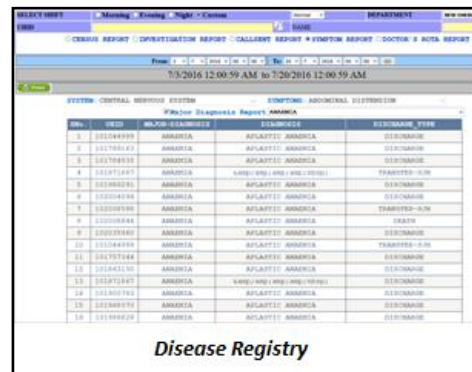➢ The entire diagnoses, symptoms, investigations etc are SNOMED CT coded.

direct view of reports from PDS

Census from PDS

Disease Registry

Phases of Implementation

Phase 1 (completed in April 2014)

- Software was developed with the help of IT professionals and changes were incorporated according to the manual process followed in the emergency department.
- Display screens and projectors were put in place in all the three emergencies- pediatric, surgical and medical emergency.
- Nursing informatics specialists were posted round the clock in ED for managing the PDS.

Phase 2 (completed by Nov 2016)

- All diagnoses, symptoms, investigations etc entered in PDS were SNOMED CT coded.
- Additional features like provision to update multiple consultation calls, MIS like admission statistics, admission waiting time etc were included.
- Different interfaces for administrators and users were created with unique credentials.
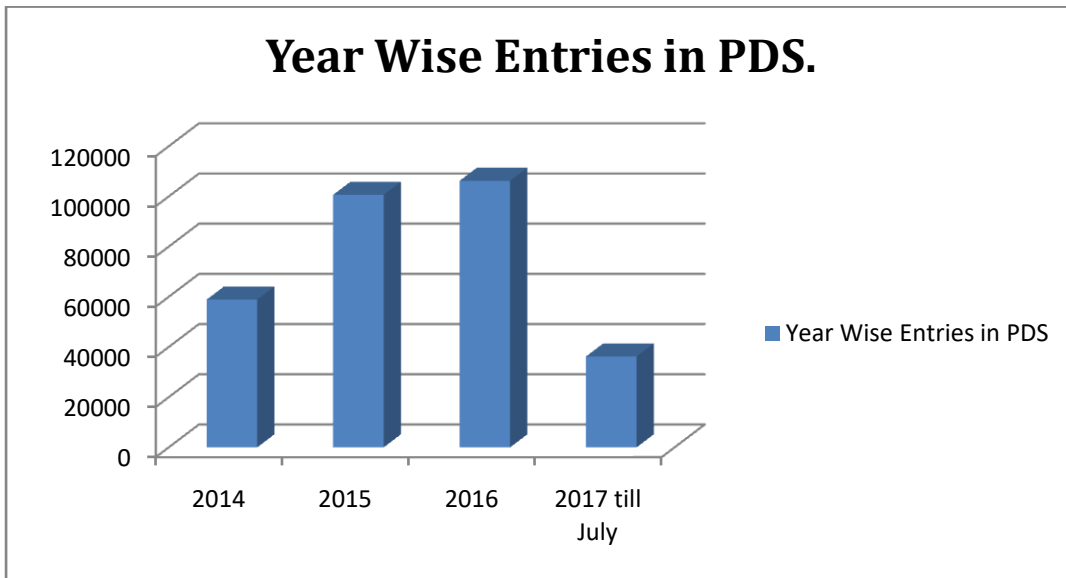- Improvised PDS implemented on Nov 2016.

Advantages of PDS over a manual register

➢ PDS acts as a data bank having much more details of a patient and their disease condition which is easily retrievable.

- A symptom based registry included in PDS which helps for research purpose and audit purposes.
- Census in one click.
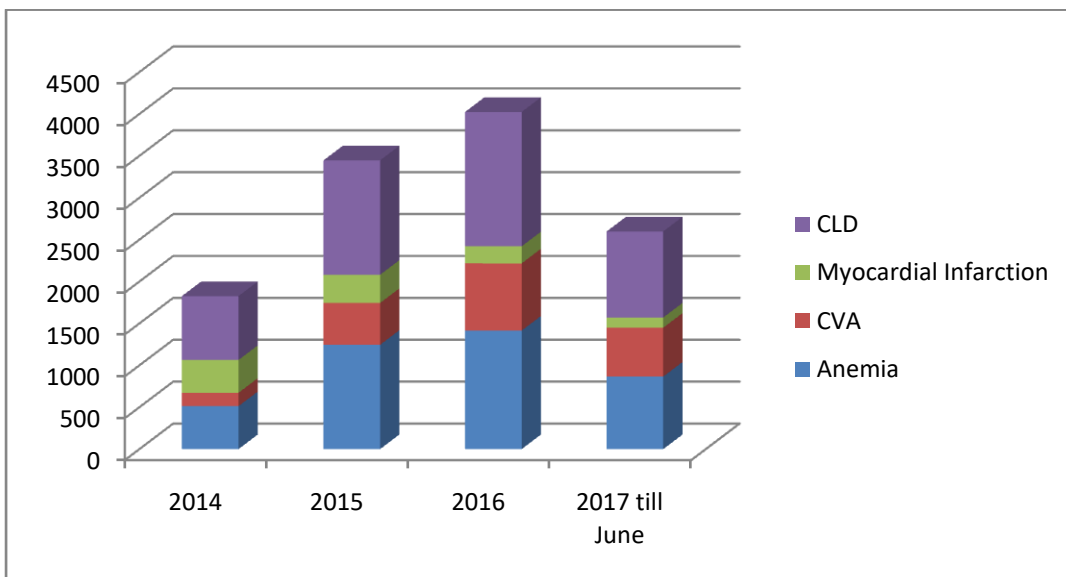- Quality indicators like time taken to admit, transfer, discharge a patient can be retrieved from the system.

Statistics from PDS

Year Wise Entries in PDS.
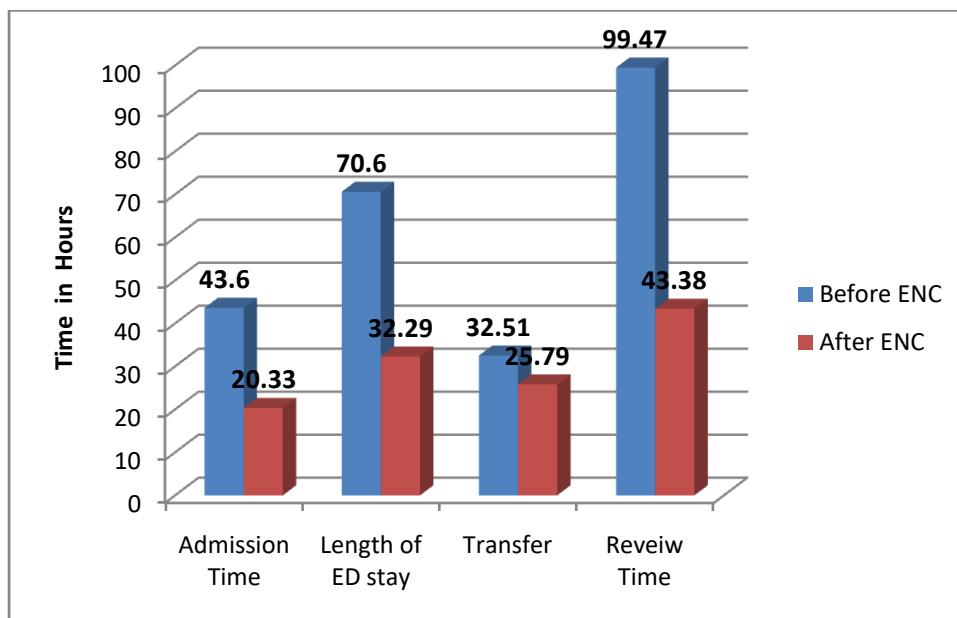

Figure 1

Common Diseases reported in ED

Figure 2

Role of NIS

- Regular rounds of ED by NIS posted round the clock.
- Real time updation of details in PDS.
- NIS coordinate for eMLC s made in ED and attaches the photo of MLC patient to the eMLC record against UHID.
- NIS also performs the role of Emergency Nurse Coordinator (ENC) who coordinate with the health care team in ED, patients and relatives.
- ENC assigns a doctor to a patient as soon as they come to ED and coordinates for early transfer, consultation, admission, or discharge of patient.
- ENC ensures that the consultation policy is maintained for all speciality calls made for patients in ED.

Quality Indicators Pre and Post ENC

Figure 3

Future Plans

- To incorporate disease specific registries in PDS.
- To use data for predictive analysis of diseases.