

INFORMATION LEAFLET



Know the Department of Computer Facility & Technology in Trauma Center.....

JPN APEX TRAUMA CENTRE ALL INDIA INSTITUTE OF MEDICAL SCIENCES

JPNATC is the most dynamic and innovative center of AIIMS headed by Prof MC Misra . This center has been responsible for introduction of the Hospital Information System (HIS) and EMR (Electronic Medical Records) system at JPNATC and has also implemented some innovative human resource management strategies, which are in turn responsible for the success of the programs launched at JPNATC. The department is also the first (and only) in AIIMS to define job responsibilities for each and every personnel of the department and to introduce a quality assurance program to ensure accountability for the defined job responsibilities.

The center is also credited for conceptualizing, tendering and implementation of the *Integrated Call Center* for JPNATC, AIIMS for which there is no precedent in the world.

Other achievements include successful implementations of the E-MLC project (wherein the Medico-legal case sheet has been completely computerized),

Access Control project, Biometric Attendance project, Computerized OPD Queue System project, Lift stretcher access control

system project, IP based CCTV project, GE-PACS and Telemedicine project, various softwares like Patient Display system, OT Display System, Payment Exemption, lab module, nursing module, Neurotrauma

Registry, Daily census and e-transfusion, integrated equipment management system, the computerized pneumatic tube system among others at JPNATC.



The department of IT has implemented all projects using best-in-class technology with great cost-efficiency using indigenous and innovative solutions. Another unique feature of the department is that its

staff is almost completely outsourced. This enables the department to have a flexible staff strength depending upon the projects at hand. Dr Deepak Agarwal, Addl Prof Neurosurgery at JPNATC heads the IT department whose strong passion and vision leads the department ahead.

Currently in progress are the implementation of Online Ultrasonography Assessment and Record for Nurses and the expansion of Network Area Storage to 64TB at JPNATC.





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HOW TO KNOW ABOUT JPNATC ?

A new look website (beta version) for JPNATC has been launched with the aim of capturing the vibrancy and dynamism present at JPNATC. The website has a clean interface and its USP is the freshness (it is updated daily) and interactivity offered. JPNATC is now also on Face book

(www.facebook.com/jpnatc),
twitter (www.twitter.com/jpnatc)

as well as on Google groups

(www.groups.google.com/group/aiimstrauma) and the website integrates all the three social networking sites so that patients and staff can stay connected with latest in trauma as well in JPNATC.

The 'tweets' are reflected in real-time in the 'breaking news section' of the home

page showcasing the cutting edge of technology of the website.

The website home page also has a 'featured story' which is updated regularly and tells something new



or interesting happening at JPNATC. There is also a signature video on the home page which is 'must see' for all visitors. It is a pleasure to walk through the various tabs and see the work which has gone into its making.

The crème-de-la-crème is the CRM on the website which on logging in gives

faculty and selected staff a personalized overview of the patients currently admitted under them, appointments for the week, their monthly rotation, official email and notices in an integrated format. When fully functional this will

JPNATC ON



be act as true IT enable for faculty and staff at JPNATC. The website and the CRM were conceptualized by the computer facility at JPNATC and implemented by a third party. Although undergoing beta testing, do browse around and give us your valuable feedback.

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STATE-OF ART RECEPTION COUNTER IN JPNATC

Reception is the face of a hospital and unfortunately is not given the importance & resources it deserves in public funded hospitals. In a major 'face-lift' a state-of-the-art reception counter was opened to general public on 13 July, 2010 at JPN Apex Trauma Centre, AIIMS. The reception has many firsts to its credit: It is the first government hospital to have trained staff in formal dress code manning the reception. The hospital is also the first amongst government hospitals to have its reception fully computerized. By computerized we do **not mean hav-**



ing a computer at the counter. As JPNATC has a mature EMR and HIS in place besides a fully functional call centre, the receptionist will have access to all patient related information at the click of a mouse. This offers unprecedented ease of use and functionality. The reception will be manned by two fully trained receptionists from 8:30AM to 4:30PM. The reception also has a desk for issuance of access control cards and services for JPNATC. Another unique feature is the provision of multiple phones on the counter for hot dial to JPNATC call centre for appointments and other queries.





INDIA'S FIRST AND ONLY 'INTEGRATED' CALL CENTRE STARTS OPERATIONS FOR JPN APEX TRAUMA CENTRE, AIIMS (Phone 011-40401010)



JPNATC/SMT Call Centre Building at NOIDA

In another first for India & possibly the world, an integrated call centre started operations for JPN Apex Trauma Centre on 2 January 2010. Although call centers are common in commercial industries like telecom, the concept has been alien to hospitals. Hospitals usually have reception desks which

manage general enquiries and appointments. An integrated call centre on the other hand manages extensive backend administrative chores and services besides providing a host of patient related activities on a common platform. In public funded hospitals like AIIMS, an integrated call centre can provide immense cost savings besides revolutionizing healthcare management and delivery. Due to the presence of a mature computerized hospital information system (HIS), JPNATC was in a unique position to leverage the advantages of a traditional outsourced call centre and innovatively wrap a multitude of healthcare services around this model to provide unparalleled benefits in patient care. The unique features of the call centre are:

- 1. Completely outsourced and scalable:** This frees up valuable real estate at JPNATC besides potentially decreasing the overheads like electricity, parking and toilets which an on-site facility would use. Being completely scalable, the call centre can quickly ramp up operations in line with increased demand and in case of disasters.
- 2. Professional operations:** The call centre will provide best-in-class service to clients with quality control at every stage and 100% call recording for auditing and quality purposes.
- 3. Patient services:** With the main thrust on improving the quality of patient care, the call centre will manage all appointments and follow-up of patients for the whole of JPNATC. The call centre will also answer queries on all admitted patients and will provide information on all diagnostic & therapeutic services available, the procedure and pricing of getting a specific service or test done at JPNATC and the approximate wait times. This information may help in empowering the patients coming to JPNATC & obviate the need to approach anyone physically for information.
- 4. Research:** Research is one of the key mandate of AIIMS and the call centre will facilitate research by ensuring follow-up of patients, administering surveys and ensuring authenticity of data.

5. Personnel job responsibility management: Job responsibilities have been defined for all staff in computer facility as well as technicians in department of Neurosurgery, JPNATC. The call centre will administer a checklist telephonically to the above employees at the end of each shift (shift handoff) to ensure compliance and accountability.

6. Centralized help desk & support: The call centre will take over the responsibility of logging & initial troubleshooting software & hardware problems all over JPNATC and this will help in providing professional 24 X 7 support services at JPNATC

7. Inventory Management & support: It is envisaged that the call centre will act as the single window for all civil, mechanical, and equipment related issues for JPNATC. The call centre can provide completely audit trail for any breakdown or even and follow up with the vendor and end user to ensure optimal utilization of resources.

8. Network & Security management: the call centre will actively monitor JPNATC's local area network (LAN) and pro-actively detect any threats and events in the network.

9. Biometric attendance management: All Casualty (ER) staff, computer facility staff & sulabh employees at JPNATC are under mandatory biometric attendance system and the call centre will manage the biometric system remotely to ensure compliance and accountability.

To ensure access to the system, the call centre number is being advertised on every discharge summary/ transfer summary of inpatients. Also, around 18 vandal proof phones have been placed all over JPNATC in public areas so that patients and relatives can avail all the services comfortably. We are very excited about the possibilities of having this unique call centre and are confident that it will turn out to be a huge success.





Live online wait times for patients in Emergency Department at JPNATC, AIIMS, New Delhi

FIRST TIME IN THE WORLD!

Background

The project was conceptualized to set a benchmark for accountability and transparency in public funded healthcare in India. There is a common perception that government hospitals are providing suboptimal care to the citizens and to some extent this is true. Being funded by taxpayer's money, accountability and transparency leave much to be desired in government hospitals in India. There are some hospitals that are overburdened (like AIIMS) and on the other hand, there are some which remain empty in spite of being 'fully functioning'

As a small initial step, we wanted statistics on the number of patients coming to a hospital, wait times for patients in emergency department as well as number of patients being admitted and discharged be available online publicly in a real time manner or as close to real-time as possible. This would make the overall working of a hospital transparent to the public. A second objective was to internally audit the clinical performance of each department and also have this audit available online publicly so that it could be compared with other hospitals in India & abroad.

Details of implementation

1. Live (real-time) statistics on the total number of patients seen till date at JPNATC and the number of patients seen today on the [home page](#).
2. Live (real-time) statistics on wait times for CT scan, X-Ray, dressing & suturing available on the [home page](#)
3. On the [statistics page](#), department wise admissions & discharges for the previous day as well patients seen in OPD (Clinics).
4. On the [Education-audit page](#), clinical audit for all departments in JPNATC evaluating the performance on various clinical and administrative measures.
5. All the above statistics are available publicly without any restrictions whatsoever.
6. An integrated [CRM](#) on the home page (login required) which displays personalized data for each clinician like patients admitted under him/her, Patients scheduled for OPD and departmental data.

Backend Staff

A large number of healthcare professionals at JPNATC, AIIMS work tirelessly in the background to ensure success of the system.

1. [Nursing Informatics System \(NIS\)](#) nurses posted in Emergency department (ED) round the clock ensure that accurate data is being entered into the Patient Display system (PDS) and supervise the overall flow of IT in ED.
2. [ED Nurses](#) enter all relevant data into the PDS for each patient coming into the ED and also enter completion time for suturing & dressing for each patient. They form the backbone of the system.
3. [Radiology technicians](#) enter the completion time of CT scan & X-ray into the system after scanning each patient.
4. [Computer Assistance Team & Support \(CATS\)](#) personnel collect various statistics like daily admissions & discharges and have it updated on the system.
5. [Faculty](#) at JPNATC do regular audits in their departments, the results of which are updated on the system.
6. [Call-Centre](#) staff which have made this online integrated web-portal possible.

How to interpret the data!

The left hand side of the website has two important statistics; the total number of patients which have been seen till date at JPNATC emergency department & the patients seen today (from 8AM). 8AM has been taken as an arbitrary cut-off time for the day so as to make it relevant for the lay person.

1. Both the above statistics are updated in a live manner from JPNATC servers. The website automatically refreshes these statistics every minute.
2. As the statistics are updated in real-time, due to network connectivity problems, it is possible that the statistics may not be visible occasionally. In this situation it would be advisable to refresh the page or try after some time.
3. Current wait times shows the wait-time for the last 5 patients who have underwent that intervention and whose start & end times have been entered into the system. The start time is taken as the time when the intervention was ordered by the doctor (entered into the system by the nurse) and the end time is taken as completion of the intervention (Entered by the radiology technician/nurse). For example, wait time for CT scan will show the wait times of the last 5 patients who have underwent CT scan (from ordering of CT scan to its completion) and whose start & end times have been entered into the system.





IT DEVELOPMENTS IN TRAUMA CENTRE

INNOVATION: LIFT CONTROL ACCESS SYSTEM AT JPNATC



A patient stretcher lift access control system has been installed for the first time *in the world* at JPN apex trauma centre, AIIMS, New Delhi. Research has shown that the likelihood of major complications occurring peaks during transport of the critically ill patients. These patients require to be transported with monitors, ventilators, infusion pumps, oxygen cylinders and other paraphernalia and time is essence during intra-facility transfer. Frequently a lot of time is wasted in waiting for the lifts and when the lift does arrive, it is usually full of people who have to be either asked to come out or somehow adjusted. Even inside the lift, the lift stops at every floor increasing the delay and putting the sick patient at risk for adverse events. In the patient stretcher lift access

control system at JPN Apex trauma centre, two lifts have been dedicated for patient transfer.

The system has been installed for the first time in the world at JPN apex

These lift doors have long range RIFD readers installed at every floor. In addition, all 180 patient stretchers (trolleys) and wheel chairs at JPNATC have been installed with RIFD cards. Whenever a stretcher comes near the designated lift, the lift gets automatically called and patient transfer times are dramatically reduced. This is an extremely patient friendly step and can have major benefits both tangible and intangible towards patient care.

Prof MC Mishra, Chief, JPNATC said that he was delighted to have the system in place and especially proud as this was the first installation in the world for such a system. The aim of introducing these measures is to improve every facet of patient care so as to meet the mandate given to this institute. He further said that technology can only be helpful if it is implemented with a human face.

The technology required to implement the patient stretcher lift access control system has been available for a long time. However, only we at JPNATC have innovatively managed to put this technology for use directly by patients and healthcare workers.

INTEGRATED CCTV SYSTEM ACTIVE AT JPNATC



Ambulance Bay CCTV

We are proud to have integrated CCTV system all Over JPNATC. The system has several unique features.

This is one of the few systems which is IP based and which makes it technologi-

cally the most advanced in the world. Also the cameras have full pan, tilt and zoom capability so that wide and flexible coverage can be obtained.

There are also 6 outdoor cameras which are temperature and humidity controlled to cover the whole campus in all seasons.



Central Control Room

In addition to the IP based system there is a another camera Network integrated with the

‘Intelligent Building Management System’ which monitors

the movement of people automatically and ensures safety of staff at all times. A total of 85 Cameras in this system have been installed in all access controlled lifts as well as common areas for 24 X 7 surveillance and archival.

Recordings from ALL cameras are automatically stored for long periods for easy retrieval in case of any incident. Many thefts and incidents have been detected retrospectively using this

system. We are proud to say that in spite of being one of the most advanced systems, this is also one of the mostcost-effective solutions implemented in JPNATC.



Lift Surveillance



Integrated monitoring system



Parking CCTV



IT DEVELOPMENTS IN TRAUMA CENTRE

BIOMETRIC ATTENDANCE SYSTEM MADE COMPULSARY FOR ALL OUTSOURCED STAFF

Another innovative project implemented at the trauma centre is **the biometric system for the attendance**. At present, all sulabh employees, deputed as outsourced staff, are putting their biometric attendance on arrival as well as departure from duty. The hallmark of this system is the provision of an accurate check on the actual number of personnel as well as to keep a track on the punctuality of the employees as far as the duty timings are concerned. For this system a major exercise was undertaken by computer facility,



anomaly, if any, is reported to the chief on a daily basis.

The biometric attendance is linked to payment release to ensure compliance with the biometric attendance system. The system has been a huge success and besides verifying the employee count, has markedly decreased the problems encountered with the manual system. However, the system requires dedicated resources from the computer facility to function optimally, besides constant supervision from faculty to ensure transparency & accuracy.

countered with the manual system. However, the system requires dedicated resources from the computer facility to function optimally, besides constant supervision from faculty to ensure transparency & accuracy.

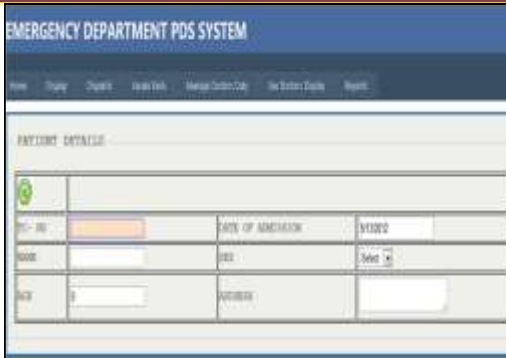


ty, JPNATC and fingerprints were recorded for every sulabh employee on the biometric machines. An accurate record of the biometric attendance is maintained and verified against the manual attendance and



PATIENT DISPLAY SYSTEM (<http://172.16.23.14/jpnatced.com/>)

Background: In a unique initiative and probably for the first time in any public funded hospital in India, a real-time computerized display system was introduced for the benefit of patients, relatives and staff at JPNATC. The need for the system arose as it was seen that patients and relatives were more likely to be satisfied if the status of their treatment and next line of management is made available to them on a regular basis.



of the patients status in real time. Another major advantage is that the software automatically collects statistics and on various parameters so that regular audits can be held without the pain of collecting data. Moreover according to these details current waiting



Mr. Vishal Sharma
Mastermind behind
the Softwares

Initiative: As the emergency is a very busy and chaotic place, it is difficult to provide accurate and up to the minute information on each patient to the relatives. The integrated and extremely user-friendly software and designed by computer facility, JPNATC and developed by two young programmers Vishal & Vikas. The emergency department nurse and nurse informatics specialist posted in ED will enter the details of the patient as he/she enters the ED and update them as investigations/consultations are done. These are then displayed on a large LCD screen in the ED.

time for X-Ray, CT scan dressing & suturing will be shown live in the JPNATC Website. In addition to this, a comprehensive list of the doctors on duty in the Emergency Department is visible for the particular day and shift. Even the dispatch files is entered online in the emergency department for discharge and transfer out patients by the counter staff since november 2012.

First Time In Any Public Funded Hospital In India

Benefits: The patient's triage area, tentative diagnosis, GCS score, specialties to whom consultation sent, investigations required and next line of management are all displayed in an easy to read format. As the data is updated, the display changes accordingly. For example, all pending consultations and investigations are shown in **red**. As and when the investigations and consultations have been done, the color changes to **green**. This way, patients, relatives and healthcare professionals can aware

It would not be wrong to say that the patient and relatives do not have to run from pillar to post anymore. All the information is readily available on the TV screen.



LCD Mounted in Emergency Department



IT DEVELOPMENTS IN TRAUMA CENTRE

ONLINE DUTYROSTER{<http://172.16.23.14/dutyroster/>}

Background :Online duty roster is an innovative software describe **the details of staff 's duty functional** since July 2013.

The biometric system for the attendance was already implemented in JPNATC but the compliance was 50% as manual roster was maintained in each ward .Moreover it was not giving a report which show the shift, leave etc. So the duty roster was created online which was integrated with biometric .

Home Page :-consists of three aspects :make roster, view roster and calculate shift

- Make roster -only the ANS is provided



with a login id and password to make and change the duties .

- View roster -All staffs here viewing the roster only.
- Calculate the shift _ Gives the

number of personnel available in a shift .

Benefits :It helps to keep an accurate track on the punctuality of employees and ensure the 100 % compliance in biometric attendance .

eMLC (<http://172.16.23.11/jpnatcMLC.com/>)

Background: AIIMS implemented an electronic medical record system with the objective of creating a tamper-proof eMLC that could be printed in a format mandated by law thereby satisfying all legal requirements

Initiative: A simple IT implementation with potential to bring much needed transparency in medico legal system which in India is known to be vulnerable to abuse from people with 'connections'

If you are a movie buff, then



mat and layout of the MLC is legally defined by a gazette notification, it can't be modified. Also, there was a question on the legal validity of electronically prepared document in healthcare in India. This difficulty was mitigated by taking legal opinion from lawyers, judges and police prior to implementation.

Achievements: Semi Finalist in Best IT Implementation of The Year 2012 Awards.

Another challenge was to make the system secure to guarantee the authenticity of the prepared document. The technology used for implementing this project is fairly simple. It's built on the .NET framework with SQL database at the backend

running on a couple of Dell blade servers and HP thin clients at the front-end.

Benefits:

The implementation of this system has simplified the work of doctors, police and the judiciary. Doctors no longer have to waste time entering demographics of the patient because all medical details in eMLC are easy to enter as they are template driven. Plus, it also prevents duplication of work. The police and judiciary are both extremely happy with this system, because they get documents that are tamperproof (authentication can be done online), legible and fully filled. All relevant details that are required for evidence are present there.

There are occasions when there is a doubt on the authenticity of the MLC and by virtue of eMLC, one could easily check the scanned record and verify the authenticity immediately.

Compliance: The system is used for every case that lands into JPNA Trauma Centre, AIIMS, New Delhi. On an average, there are about 100 to 175 such cases every day. The system has recorded more than 50,000 cases till date, which are being used for generating reports for further decision making.

The famous 'Baby Falak' case had an eMLC made and the eMLC was available to media and even printed in various news reports

you would recall a scene from the famous movie 'Munna Bhai MBBS' where an emergency patient is denied medication for not filling a 'form'. Movie may (or may not) have exaggerated the issue but in reality there is an involvement of 'Medico Legal Case sheet' (MLC) for all trauma & suspected poisoning cases in India. Manual entry in this form of judicial importance is both time consuming and prone to tampering, and

even if it is filled by time constrained doctor in the Trauma center, more than often it is illegible thereby becoming a major road block in resolving cases.

To come out of this dilemma, AIIMS implemented an electronic medical record system with the objective of creating a tamper-proof eMLC that could be printed in a format mandated by law thereby satisfying all legal requirements.

Challenges: The biggest challenge in implementing this sort of a system was to make eMLCs legally acceptable. As for-



IT DEVELOPMENTS IN TRAUMA CENTRE

eMLC IMAGES

Background : JPNATC,AIIMS has already implemented an emlc that could be printed in a format mandated by law thereby satisfying all legal requirements since August 2012. In addition to that the emlc is now upgraded with including the images of patient and injuries which is fully functional since 15 July 2013.



system and to make it smoothly carrying out with co-ordination in a busy Emergency Dept.

Benefits : All relevant details with images are there in the MLC form which makes it more

authenticated. The police and judiciary are both extremely happy with this system as they get the documents that are tamperproof , legible and completely filled .

Compliance: It is 100% .

Challenges: The biggest challenge in implementing this sort of a system was the issue regarding capturing and uploading of photos in the

SMS SYSTEM (<http://172.16.23.28/jpnatced.com/sms.aspx>)

Background: The doctors display system has enabled to capture the names and telephone numbers of all the doctors on duty in the emergency department. Usually when a patient arrives, a review has to be made. The Emergency Staff calls the Concern Doctor telephonically from time to time. It becomes difficult to call the doctor time and again. So a system was developed wherein SMS can be sent through the software to the concerned doctor. The system came effective from march 2013 onwards.

The software is integrated with the patient display system. There is provision for sending two types of messages. **Type I message is "Needs review urgently of the patient whose TcNo is: ... Reach ED Stat" which is sent to the doctors duty mobile and personal number whenever a review is made and updated by NIS on PDS. Type II SMS is "Needs review, deteriorated, reach stat no of sms(s) have been already sent for the patient whose TcNo is:" which is sent for repeat review Type I and Type II SMS are sent automatically by the software. The doctors' name is available from doctors display system. Additional SMS can be sent anytime if need arises**

by the NIS.

Challenges: There was an initial complaint by the doctors as they were receiving lot of sms on their mobile.

Benefit:

- **Higher accountability if a doctor fails to review a patient as there is proof that sms alert was sent form the system.**
- **Easy to send sms.**
- **Highly specialized system integrate with PDS.**

Compliance: It is 100%. A new project is in the pipeline whereby radiological images can be sent on the doctors mobile.





IT DEVELOPMENTS IN TRAUMA CENTRE

COMPUTERIZED PATIENT RECORD SYSTEM



Cover Page of CPRS

Background: CPRS is a fully integrated and comprehensive suite of medical record applications and databases that work in collaboration to provide a complete overview of patient's medical records at JPNATC which help in improving clinical and administrative patient management. Even today, most medical staff members spend between 30-50% of their time doing paperwork. By implementing Computerized Patient

Record Systems, the staff no longer has to deal with repetitive dictation and manual note taking, which in turn, will reduce the time spent on paperwork.

Challenges Faced: Initial resistance by the nurses and the doctors to use the new system but eventually the staff is now more comfortable in computer documentation as the realization of its utility has slowly crept in.

Benefits:

- A complete and accurate lifetime medical record
- Visual access to all data
- Simple and direct ways to look up and view information
- Immediate data accessibility from any secure location
- Reports to allow interpretation of changes over time
- Adaptability over time
- Reduce costs of acquiring data
- Maximize collaborative research
- Manage registration and scheduling of new patients
- Record patient history, progress notes, procedures, and diagnostic tests.
- Increased patient welfare
- Decrease in fatalities
- More efficient and effective use of personnel
- Increase in patient satisfaction
- Direct Update from EWD software for admission, discharge and vital parameters.

Compliance- CPRS is running successfully all over the trauma center with compliance rate of 100% in departments like Neurosurgery.



Lab Value in Graphic format

Record Systems, the staff no longer has to deal with repetitive dictation and manual note taking, which in turn, will reduce the time spent on paperwork.

Initiative: It is the integrated patient information record system, which is used by doctors, staff nurses, technician for data entry operators etc at JPNATC. CPRS is the back bone of the hospital which provide true, relevant, complete information regarding patient with out wasting any time

To use the this system, the user requires an access code and a verify code which is provided by NIS (nursing informatics specialist).

After the successful access is obtained, the Cover Page appears, which contains tabs for nurses notes, recent lab result, Active Medication, Clinical reminder, Appointment/visit, Active problem (active& inactive problem regarding patient), Notes like admission notes, discharge notes, abscond notes, blood bank consultation, neurology consultation notes, ortho consultation, surgery consultation and various other type note. New templates can be added over a period of time so that all the docu-

ELECTRONIC DEATH CERTIFICATE (<http://172.16.23.11/JPNATC.COM/>)

Background: Documentation of the death forms is a tedious process involving filling up of a large number of forms consuming a lot of precious time of the physicians

Initiative: On January 1, 2012, a web-based application called the Electronic Death Certificates was implemented.

This application includes valuable features to simplify the collection of death information and store it in

a centralized database. Just a single entry into the home page is now required. Once the TC No. is entered, patient details are updated automatically. Only one single form on the home page needs to be filled which automatically feeds the data into a centralized system from which all the other forms that is death card, death certificate, police application, death report and OPD Note can be obtained.

The software consists of the following components:-

Home:-Consists the format in which the concerned SR fills all the information related to the patient

Once the details are updated on home screen by the SR on duty, nurse can obtain the required number of print outs

- 2 copies of print card (not for ED patient)
- 2 copies of print death certificates
- 1 copy of print police application for duty constable

- 2 copies of print death report
- 2 copies of print opd note (only for ED and OPD patient)

Challenges: One of the most successful softwares implemented in JPNATC, Electronic Death Certificate was readily accepted by the Doctors and Nurses. The only problem was to train the nurses on how to obtain the print outs. The gap was filled by NIS who were available round the clock for any assistance.

Benefits:

- This system reduced the documentation manifold as only one form needs to be filled on the computer.
- Simplified system of obtaining the death records
- User Friendly Format
- Easy accessibility of records on a fly.
- Accurate maintenance of the records as there is little scope of errors as compared to manual entries.

Compliance: The system is now mandatory in JPNATC. NIS (Nursing Informatics Specialist) provides training to the doctors to create the electronic death certificates It was started in ED initially but slowly it was implemented in all other wards. This technology has made once thought impossible, the manual entering of death form as obsolete.



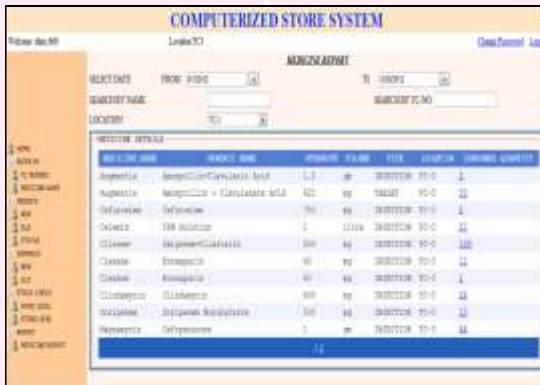


COMPUTERIZED STORE INDENT SYSTEM AT J.P.N.A.T.C.

(<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: Computer technology has not yet been widely applied in health care delivery system in India, even though it could favorably influence the cost, accessibility, and quality of health care. For the first time in AIIMS, store computerization has been implemented successfully and that too from scratch.

Initiative: In the first phase, the medical stores were computerized and a homegrown software was developed in JPNATC by two young software developers Vikas & Vishal. The sister in charges in all departments were given training in using the software and computers were installed in the In charges Offices across JPNATC. The store database was updated with all medicines, their rates and vendors. The USP of the software is that it is web based and can be opened through a web browser on any computer in JPNATC (after authentication). Indents are sent and received through the system and stock status can be seen on the fly.



Challenges: One of the biggest challenges faced in the implementation of this software was to train the nurses on how to use computers and also to make them familiar and confident in implementing the software.

Benefits:

- A systematic and organized system of making indents.
- Easy to use
- Medical and Surgical Indents can be made.
- Costly medicines can be entered individually for a particular patient by the TC No.
- Status of the indents can be checked.
- Record of old/new demands are readily available.

available.

- An efficient means to check the stock level both in the ward as well as the store.

- Medicine reports can be easily accessed which gives a detailed record of the consumption of medicines in any department for any given period of time.

Compliance:

There is 100% compliance as all indents are made via computers only.



ELECTRONIC MEDICAL AND FITNESS CERTIFICATES

(<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: A medical certificate is a document stating either that a person has passed a medical examination, or that a person is unfit for work for a stated period of time. A fitness certificate on the other hand certifies a person is fit to join for duties from a designated time described on the certificate.

Initiative: In this direction, yet another feat achieved by JPNATC is the implementation of the electronic medical and fitness certificate or eCertificates' which came into effect from 12th July, 2012.

For accessing the system, the senior resident is required to login with a unique id and password provided by the Nursing Informatics. After logging in, the Home

Screen shows the name of the doctor issuing the certificate. Patient details are automatically updated by entering the TC No of the patient. Various fields are incorporated for filling the certificates like Issuing Department, diagnosis, number of



days of leave required and EHS No for staff. Data is then submitted and saved into the software which automatically opens the print page. Then 2 copies of the certificate are printed.

Total number of entries made till date can easily be obtained by the software developer from the database.

Challenges: Initial reluctance to adopt a new system by the Senior Residents was soon overcome by rigorous training and motivation.

Benefits:

- Ensures facilitation of easier, user friendly software for creating and printing medical/ fitness certificates as compared to the certificates made manually.
- Only correct, required number of certificates are issued by authorized personnel.
- No misuse as it prevents issuing of any false, misleading or inaccurate certificates.

Compliance: The system is implemented and running successfully across JPNATC. No manual certificates are issued currently.



ELECTRONIC BLOOD REQUEST (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: Like any other commodity, blood and its components are consumed in large amounts both in emergency as well as routine cases. Its often very time consuming to fill separate forms when there is a requirement for a large number of components. It becomes all the more difficult when the situation is an emergency and patient might be literally bleeding to death.

Challenges: This system was welcomed by everyone. The only drawback was that nurses found it difficult to obtain proper print out. Technical difficulties were addressed by the NIS and CATS. (Computerized Assistance and Team Support) personnel posted 24hours in Trauma Centre.

Benefits: It saves a lot of time of doctors especially in emergency scenarios when saline cross matched is expected to reach within 15minutes of a request being made.

Its comparatively easy to fill one form electronically instead of many filled manually for a single patient.

Also, records of all requisitions made can be easily obtained.



Initiative: A major step taken in this direction is the electronic requisition for blood implemented in JPNATC since 17th January,2012

Earlier separate forms were needed to be filled by the requesting doctor for each required

component that means if a patient required RBC, FFP, Platelet, three forms needed to be sent all filled manually. But now with the help of this software, making requisition for blood became a much simpler and easier process as only one form needs to be filled electronically and printouts can be taken as per the requirement of component. The form remained the same only now it is electronic. Demographic details of patient are updated automatically by just entering TC No. Lab details and the components required can then be saved and updated in the home screen. Printouts are then obtained by the nurses and sent to the blood bank. All the requisitions made from any patient till date can be easily obtained by clicking on the reports tab.



Compliance: Its 100% as all requests for blood are now made electronically.

E- BLOOD BAG TRANSFUSION MODULE (<http://172.16.23.11/JPNATC.COM/>)

Background: The blood banks are responsible for the collection, processing, typing, safety and storage of blood for research and medical purposes. A systematic and vigilant system has to be in place to ensure zero error in this highly specialized component of healthcare.

Initiative: As a giant leap in this direction, JPN Apex Trauma Centre has successfully implemented an Electronic Blood Transfusion System on 1st August, 2012. To avoid any kind of errors right from the dispatch of blood from the blood bank to the actual transfusion to the patient,

The Electronic Blood Transfusion System requires identification and validation by two types of barcodes:-

1. Barcode on Blood Bag- Once a requisition is made for any blood component; Blood bank enters patient details and carefully issues blood after scanning a unique bar code given on individual blood bags. The blood bag is scanned once only for a given patient.

2. Barcode on patient's ID band- The nurse who receives the scanned blood bag in ward/ICU then rescans the barcode on blood bag and verifies correct blood bag by scanning against the patients ID Band.

Barcodes scanned at these two vital points of care ensure that the correct protocol is followed and that patients receive the right blood as the nurse transfuses blood only when the blood is correctly verified against the patient with the help of the software. dispatch the bag to the related department.



Challenges: The Blood Bank Technicians and Nurses were initially reluctant in accepting the system as it was presumed it is takes extra time.

Benefits:

- improve transfusion safety
- reduced errors;
- Lesser time taken to deliver blood
- improve compliance with regulatory requirements
- The use of barcode integrated with the blood transfusion software has made the blood transfusion safer.
- improve the efficiency of hospital transfusion,

- the rapid availability of blood for those patients who need it urgently,
- less wastage
- improved use of staff time.

Compliance:

A relatively new software, compliance rate is roughly around 50% for trauma centre but an amazing 90% in Neurosurgery ICU.





ICU CRITICAL SCORE TRENDS (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: Computerization at JPNATC has come a long way. Apart from integrating the patient information into a systematic patient display system, there are now specialized innovations and systems in place for better individualized patient care. ICU Critical Score Trends being one of them.

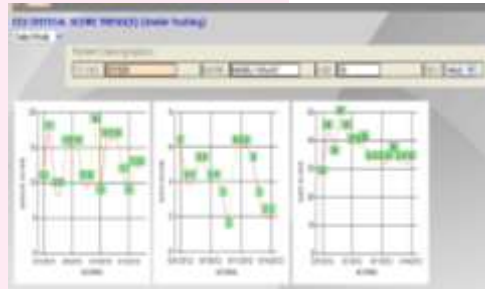
Initiative: Predictive scoring systems, that is, **ICU Critical Score Trends** have been developed to measure the severity of disease and the prognosis of patients in the intensive care unit (ICU).

At present, the system is actively implemented at the neurosurgery ICU. The nurses are responsible for entering the ICU score for the assigned patient once a day preferably during the night shift. The nurses enter the TC No. of the patient which automatically updates the patient demographics.

Three validated predictive scoring systems are used. They include the

- Acute Physiologic and Chronic Health Evaluation (APACHE) II system- APACHE II was designed to provide a morbidity score for a patient. It is useful to decide what kind of treatment or medicine is given.
- Simplified Acute Physiologic Score (SAPS) - SAPS II was designed to provide a predicted mortality, that does not reflect the expected mortality for a particular patient, but is good for benchmarking. In a rather simple way, it makes it possible to provide a single number that describes the morbidity of a number of patients.
- **Sequential organ failure Assessment Score (SOFA)**- SOFA was designed to provide a simple, daily score that indicates how the status of patient evolves over time.

ICU Critical Score Trends derive a numerical value, or severity score, from a variety of clinical variables. The nurse enters the clinical variables in the integrated table of all the three scores (APACHE, SAPS, SOFA) developed especially at the JPNATC.



Once the variables are entered, the scores can either be calculated either individually or all at once by selecting the required option. The calculated scores are represented graphically in a cumulative manner on a day to day basis.

Challenges: The nurses were supposed to use this software but there was an initial resistance by the nurses that this system is an anaesthetists forte.

Benefits:

- Such measurements are helpful for clinical decision making, standardizing research, and comparing the quality of patient care across ICUs.
- Can be easily taught and used by the nurses with a basic working knowledge of computers
- Does not involve a large amount of manual calculations.

Compliance: It is implemented 100% in Neurosurgery ICU.

ELECTRONIC PATIENT WAITING LIST SYSTEM (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: In a large public sector hospital like JPNATC, there is always huge demand for bed occupancy. It becomes difficult to prioritize admissions and schedule surgery, lingering dilemma about whom to admit and whom to deny.

Initiative: To simplify the process for admitting a patient or scheduling for routine/ priority surgery a unique software was developed called 'Waiting System'

In the Home tab, Admission date registrations can be made for a patient. Options can be selected for surgery



for consultants with secured ID and password for approving the dates for admission and surgery.

On a daily basis, current waiting list can be viewed and the patients are called for surgery according to their waiting number by the SR neurosurgery. Waiting List consists of a detailed list of the patients awaiting admission.

Once all the initial formalities are completed for the surgery, admission form is updated by the tentative dates allotted for surgery.

Benefits:

- Complete list of the patients awaiting admission is available at one place.
- An organized format for scheduling and allotting dates for surgery.
- Patients are called only by the number allotted in the waiting list. This prevents any kind of prejudice.



planned, Tentative admission date can be allotted. Also blood requirements and cost of implants can be updated. There is an approve tab

EQUIPMENT (MEDICAL DEVICE) MANAGEMENT

(<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: There is no doubt that medical devices have saved millions of lives because of their awe-inspiring technology. These devices assist disease prevention and diagnosis while contributing to the large amount of medical data needed to create new therapies to relieve suffering.

Initiative: On 20th April, 2010 for the first time in AIIMS, JPNATC launched a software about Equipment (medical device) management. It has been implemented successfully. All Technician were given training in using the software.

In JPNATC we have policies and processes on equipment control and asset management. Biomedical equipment technicians control and assess equipment routinely. Equipment control begins with the receipt of a newly acquired equipment item and continues through the item's entire life cycle. Newly-acquired devices should be inspected by biomedical equipment technicians (BMETs), who will establish an equipment control / asset number against which maintenance actions are recorded. This is similar to creating a new chart for a new patient that will be seen at the medical facility. Once an equipment control number is established, the device is safety inspected and readied for delivery to clinical and treatment areas in the facility.



The salient features of this software are:

- Daily reports of the equipments malfunctioning which is maintained by the technicians.
- Utilization log listing which equipment is being used for which patient.
- A separate tab for adding new equipments in the already existing checklist.

Benefits:

- Ensures Functioning of Equipment
- Producing reliable test results
- Minimizing instrument breakdown
- Lowering repair costs
- Preventing delays in reporting test results
- Maintaining productivity
- Maintaining a high level of performance
- Lengthening instrument life
- Reducing interruption of services due to breakdowns and failures
- Improving customer satisfaction
- Improving the technologist's confidence and knowledge

Compliance: There is 100% compliance.

A computerized record of Daily Checklist of the equipments is maintained by the technicians to ensure optimum functioning of the equipments and more importantly to take remedial actions as and when required so that patient care is not compromised.



OPD TABLET

Background: Keeping pace with the tradition of using cutting edge technology for patient care, JPNATC introduced for the first time in any public funded hospital, tablet based care in OPD using the widely renowned mcura application. Built on the belief that Healthcare providers/ organizations should have all the relevant clinical data available to them anytime/anywhere, to make the right decision, this innovation is functional since February 2013 after months of research and training. Three Samsung galaxy tablets have been utilized for this purpose. NIS is responsible for the functioning of the tablets and implementation of the software.



multiple front office staff

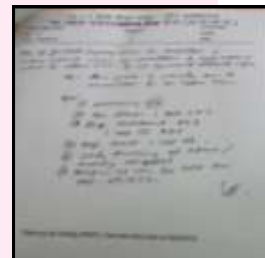
- Setup/update multiple hospital schedules
- Cancel/Move single slot/Multiple slots
- Block /Unblock single /multiple slot/schedule for hours/days/months
- Simple Patient Search
- Patient Appointment Allocation/Reminders
- Easy capturing of Past History/ Vital Signs/Clinical Parameters
- Patient Medical Records Retrieval
- Current visit Complaints/Diagnosis entry
- Lab orders entry
- Patient Medical Records Retrieval
- Medical advice entry
- Lab Tests Review
- Lab Image/Video/Document Retrieval
- Advice & Plans entry
- Image Management
- Image comparison option
- Diagnosis entry
- Drug Reference Guide
- Test results uploading provision to Lab as Text/Image/Video including PACS

mCura is a complete, scalable, and effective solution for the entire healthcare community with a flexible platform that can influence and integrate relevant modules and with external systems too. It initiates a high-performing healthcare system, where all those engaged in the care of the patient are linked together in secure and interoperable environments, and where the flow of clinical data directly enables the most comprehensive, patient-centered, safe, efficient, and effective delivery of care where and when it is needed most – at the point of care.

Benefits:

- Appointments at single screen view
- Accessed by single /mul-

This application is truly an example of bringing the most excellent innovations to suit the highly evolving healthcare IT domain. OPD visits are now less grueling for the patients due to this amazing software where all is available at one touch.





OT DISPLAY (<http://172.16.23.14/jpnatcot/ot.aspx>)

Background: Surgery for a lay person is a very difficult, emotionally draining and a traumatic experience. While the surgery is in progress, a patients relative is usually apprehensive regarding the status and the outcome of the surgery.

Initiative: Therefore, as part of the Surgery Module already running successfully in JPNATC, a new software was implemented from August, 2012 keeping in mind the emotional needs of the patient's relatives called the 'OT Display'

So a step-by-step update on the progress of surgery was made possible with the help of this innovation. Right from the time, patient enters inside the OR till the time patient is shifted out of the OT, the details are visible to the relatives on the giant screen put up in the waiting room.

All that the nurse has to do is to update the patient's movement and status of the surgery inside the OR by clicking on the suitable tab.



tion, incision or closure has taken place. A continuous progress bar displays approximate time left for the surgery to be completed according to the approximate time entered in the OT schedule by the Senior Resident. If at all the surgery gets delayed due to any reason, the nurse can always prolong the time intimating the relative checking on the progress of the patient. This software helps in providing an accurate and minute to minute update on the number of patients inside the OT (that is in each theatre) as well the progress of the surgery for the individual patient.

Challenges: This software was very well accepted by the OT staff as it gave comprehensive details about the patient to the relatives on a TV Screen. The only drawback being, this system is not very helpful for the illiterate care givers.

Benefits:

- Easy to use
- Saves time
- Alleviates the fears of the relatives
- Efficient way to communicate vital information
- Bridges gap between patients relatives and healthcare provider
- An accurate and minute to minute update is available.

Compliance: It is 100% for scheduled cases but roughly 50% for emergency cases.

The relatives sitting in the Waiting area can easily track the movement of the patient by the update available on screen Eg- Patient is in waiting area, is inside OT or the patient is in Recovery area. Also, once inside the theatre, screen displays whether the induc-

SNO.	TC-NO.	PATIENT-NAME	OT	PROGRESS %	STATUS
1	328211	SANGEETA SANGEETA	OT1 SURGERY		Incision
2	280733	HUKAM CHAND	OT3 EMERGENCY		Incision
3	329039	HARIB HASAN	OT5 NEUROSURGERY		Incision
4	323822	AASHISH MOHANKA	OT2 ORTHOPEDICS		Incision

PNEUMATIC TUBE SYSTEM

Background: At Jai Prakash Narayan Apex Trauma Centre, AIIMS Pneumatic tube system are highly complex systems, which perform a great variety of tasks. It is an automated guided vehicle which delivers on-demand items weighing up to 7 lbs. at speeds up to 25 feet per second. This allows the transfer of items over 280 mm in diameter and almost 500 mm in length. Materials such as blood and tissue samples can arrive at the lab in seconds.

Initiative: This simple machine uses a blower or vacuum that produces either suction or positive pressure, which is efficient because only one end of the tube is required to do work in order to transport the carrier. One of the latest innovations for vacuum tube systems is tracking the cylindrical carrier as it transports medications and other supplies. With a hospital pneumatic tube system, laboratory samples, units of stored blood or patients' files reach their destination quickly. This simple machine uses a blower or vacuum that produces either suction or positive pressure, which is efficient because only one end of the tube is required to do work in order to transport the carrier. Tube system creates a direct connection between all hospital wards, such as blood banks, outpatient departments, nursing wards.

Pneumatic tube systems are comprised of user stations, carriers to contain and transport lightweight unit-load materials, and a strategically designed network of piping and traffic control devices to ensure optimal performance. This system is currently operational in Blood bank, Routine Lab, Emergency room, OT, ICU and all Wards



Benefits:

- The pneumatic tube system transports a multitude of small and medium-sized items.

- laboratories can be centralized.
- Helps increase efficiency since the staff is no longer busy running errands, allowing the wards to stay occupied all the time.
- High speed, light unit material transport on demand
- Saves time and space
- Reliable air-cushioned transport of delicate items
- Improved efficiency and productivity
- Long-distance transport overhead, underground, between buildings
- easy-to-read, illuminated display
- Indication of destination name and number
- Search key and address list
- Individually programmable destination numbers and addresses
- Indication of system status and operating sequence



Challenges: A great amount of planning and training was required to fully integrate the system both in the infrastructure as well as the daily routine of the staff.

Compliance: This system is one of the best technologically advanced systems implemented in JPNATC as less time is spent in sending samples and receiving reports. It is used extensively



NEURO TRAUMA REGISTRY ([HTTP://172.16.23.28/NEUROREGISTRY/](http://172.16.23.28/NEUROREGISTRY/))

Background: Neuro trauma registry is an online directory, which provides complete information about head, spinal or any other complicated neuro trauma cases, which were admitted in JPNATC, AIIMS. It was designed and developed by our programmers Vikas and Vishal .

Initiative: The main mission of this system is to communicate valuable experience networking with professionals in each department of the hospital in creating meaningful and worthwhile enterprise.

The registry mainly consists of a

- **The Home Page-** comprises of a patient's complete identification data, type of injury, and GCS status at the time of admission and pupil's reaction.



- **Course in the Hospital** - gives a detailed report of a particular patient's discharge /death date, GCS at discharge / prior to death, whether any improvement after surgery if he un-

derwent one and power of limbs at discharge or death. The present bed occupancy list of patients in the casualty at the time being is also shown in the course in the hospital registry

- **Patient's Reports-** The no. of head and spinal injury cases and its details of a day, week, and month or of any previous time can be obtained from the patients reports.

- **Update Reports Form-** in which the health care personnel has got the facility to correct

any data which was found wrong while counter checking the details.

- **Admin reports-** A consulting physician has the facility to retrieve any of his patient's complete details from admin reports.

Benefits: The well integrated and fully functioning registry is a boon to the health care workers as they can retrieve the complete information at their finger tips.

A simpler format for entering data has been developed by the in house programmer Mr Vishal in march 2013 which facilitates direct, real time capture of information form Patient Display System. Moreover, NIS in each shift can easily verify and update the CT findings, type of head/spinal injury etc due to simpler color coded list now available in the reporting tab of this amazing software.

SURGERY MODULE (<http://172.16.23.14/jpnatcot/>)



Background: In AIIMS Trauma Centre, OT computerization has been implemented successfully with surgery module on 5th Aug 2011.

In the first phase, OT list were computerized using home-

grown software developed in JPNATC by young software developer Mr. Vishal.

Initiative: OT in charges and all OT staff were given training in using the software and computers installed in the OT. The OT List database was updated with all surgeries. The Utility of the software is that it is web based and can be opened through a web browser on any computer in JPNATC (after authentication). OT List are send through the system and record status can be seen from anywhere in JPNATC.

The OT scheduling tool is part of the overall scheduling capability of the Electronic OT Record. Customized schedules are created and managed to reflect the surgical services and facility capacity. The schedule manages multiple resources including surgical team, rooms and patient

availability. As part of the Surgery module, Schedules can also be managed for the specific requirements on the day of surgery.

The Electronic O T Record System shares common data elements between the inpatient and outpatient electronic OT Record settings, and the entire surgical schedule from preadmission to discharge from recovery.

Benefits:

- This an advanced Software, which help us in keeping complete and accurate record along with immediate data accessibility of the patient.
- Reduces duplication of data entry and keeps data synchronized, ensuring that patient records are accurate, and facilitates report management and timely reimbursement
- Requisition for blood can be made while scheduling itself.

Compliance: Surgery Module is running successfully all over JPNATC





NURSING QUALITY IMPROVEMENT PROGRAM (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: Nursing Quality Improvement Program, a unique initiative implemented in JPNATC, is designed to enhance patient care through systematic assessment and improvement of quality and safe care delivered by nursing personnel. Through evaluation of clinical and operational performance, the Department will provide evidence-based opportunities to improve patient care practices and integrate them into ongoing nursing processes. This will facilitate and support nursing excellence.

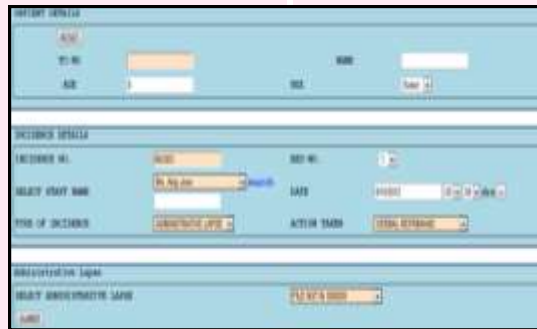
Initiative: The goal of the quality improvement program is perpetual improvement in the delivery, quality, efficiency and outcome of patient care and services. This will be accomplished through a methodical analysis of data provided via ongoing monitoring, evaluation and planned improvement activities.

The salient features of this software are

- The Home Screen displays a tab for entering the patient details for both positive as well as negative reinforcement.
- Incidence Details: Each incident is recorded with a unique incident number for easy recordkeeping and retrieval. The incident can then be recorded against the concerned staff on any given date and time.

Various incidences which can be recorded are

- Administrative Lapse- Example: File not in order, bed not



maintained, monitors not connected and others.

- Patient Care Lapse- Example: Clinical Assessment, Medication Error, Negligence, Others.
- Documentation Lapse- Example: No Relative Documents, Nursing information Sheet Incomplete, Not recorded incident, No barcode on pages, Missing data, Others

- Behavior Lapse- Arguing, Disrespectful, Complaint by relative for rude behavior, Late coming, early going, others.

- Star of the Month- Certificate of Appreciation, Verbal Appraisal, Good feedback from Relatives, Senior Resident, Consultant, and Deputy Nursing Superintendent.

Actions to be taken for the lapses can be recorded under various headings like Verbal Reprimand, Memo, Written Complaint to DNS and Written Complaint to Dr Deepak Agrawal.

Benefit: This system definitely helps in improving nursing care quality by enhancing performance and improving infrastructure and accountability.

Compliance: 100% in Neurosurgery ICU. Incidents are regularly recorded for Resident Doctors and Nurses.

ELECTRONIC CENSUS

BACKGROUND:

Hospital crowding is a growing problem for safety and quality reasons. Hospital crowding adversely affects access to emergent & elective care, Quality & safety of care, Patient & staff satisfaction and Finances

Avoidance of crowding requires accurate measurement and good management of hospital occupancy. Midnight census is a tool to measure bed occupancy, often expressed as monthly or annual averages.

very essential to keep an accurate record of bed occupancy and patient days.



A programme was developed to facilitate online entry of census to prevent any errors or duplications.

The counter staff has to just enter the TC no of the patients and the details are automatically updated. All entries are made from Report Book so there are less chances of error. Duplicate entries can also be not made. Census form each ward is then collated and compiled by the

supervisor and sent across to the duty officer.

Previous bed occupancies can also be easily accessed.

Benefits:

- This unique software makes compilation easier and accurate.
- Accurate data on admission, discharge, death.
- Detailed information about bed occupancy and patient demographics ward wise and hospital wide
- Easy to use .software

Compliance: It is 100%.



Sentinel events & medical errors increase when hospital occupancy exceeds 85%-90%. Thus it is



eLAB MODULE (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: Yet another visionary envisaged by the IT department is soon to be fully implemented eLab Module.

Initiative: Although lab samples are now sent by technologically advanced Pneumatic Tube system, yet the system of documentation still remains primitive, that is, manual entry in a lab book made by the nurse which is then received by the lab personnel. With this new initiative, lab entries can be made and receiving done on the software itself. Samples can be sent after entering details into the lab module for all major tests like ABG, TEG, biochemistry, hematology, coagulation studies among others.

The reporting tab is now fully functional and all the reports for any particular patient can be accessed by just entering the patient's TC NO. If someone wants to access reports selectively for yesterday, today or last week is now possible on this software.



Challenges: Only the reporting tab is active at present and it is running successfully.

Benefits: Once implemented fully, it will do away with the age old traditional method

of keeping manual records. Which means lesser books to be maintained by the nursing staff. In addition to this, all the data is readily available at just the click of the mouse without painfully searching through a number of books in case any records needs to be accessed.

Compliance: Only reporting tab is fully functional which is used very well by the doctors and nurses.



Another feature of this amazing software which is in the pipeline is the detailed record of the patient's parameters like vital signs, GCS, total intake and output, total drain in 24hours to name a



OPEN PACS (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: Technologically, at par with the best hospitals in the world, a picture archiving and communication system (PACS) was implemented in JPNATC since November, 2011. It is a medical imaging technology which provides economical storage of, and convenient access to, images from multiple modalities (source machine types).

Initiative: Electronic images and reports are transmitted digitally via PACS; this eliminates the need to manually file, retrieve, or transport film jackets. The universal format for PACS image storage and transfer is DICOM (Digital Imaging and Communications in Medicine).

Non-image data, such as scanned documents, may be incorporated using consumer industry standard formats like PDF (Portable Document Format), once encapsulated in DICOM.

A PACS consists of four major components: The imaging modalities such as X-ray computed tomography (CT) and magnetic resonance imaging (MRI), a secured network for the transmission of patient information, workstations for interpreting and reviewing images, and archives for the storage and retrieval of images and reports.

Benefits: Combined with available and emerging web technology, PACS has the ability to deliver timely and efficient access to images, interpretations, and related data. PACS breaks down the physical and time barriers associated with



traditional film-based image retrieval, distribution, and display.

- **Hard copy replacement:** PACS replaces hard-copy based means of managing medical images, such as film archives. With the decreasing price of digital storage, PACSs provide a growing cost and space advantage over film archives in addition to the instant access to prior images at the same institution. Digital copies are referred to as Soft-copy.
- **Remote access:** It expands on the possibilities of conventional systems by providing capabilities of off-site viewing and reporting (distance education, teleradiology). It enables practitioners in different physical locations to access the same information simultaneously for teleradiology.
- **Electronic image integration platform:** PACS provides the electronic platform for radiology images interfacing with other medical automation systems such as Hospital Information System (HIS), Electronic Medical Record (EMR), Practice Management Software, and Radiology Information System (RIS).
- **Radiology Workflow Management:** PACS is used by radiology personnel to manage the workflow of patient exams.



BED STATUS (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Bed Status is an innovative software which describes the current location of a patient. With the help of this software, it becomes very easy to update patient movement in the trauma centre Whether it is admitting a new patient, transfer in within JPNATC, transfer out, discharge, death, LAMA or any abscond.



becomes easier for the registration desk and the physicians to plan for new admissions and transfer patients within trauma centre.

A search patient tab is made especially available for searching any particular patient by name/TC No.

Wrong entries, if any, can be recti-

All the details about the patient can be entered and visible at one go, for example, the concerned department with bed number, attending/primary physician

and even patient diagnosis. For new admissions and transfer in, a graphic map of each department is available showing the occupied and vacant beds. It



fied from Admin tab after proper authentication.

All the details are updated at least five times in 24 hours by the CATS personnel.

Thus, this software simplifies the process of retrieving information as far as the bed occupancy is concerned.

TC No.	PATIENT NAME	AGE	SEX	DEPARTMENT	WARD	ATTENDING PHYSICIAN	PH	DIAGNOSIS	ADMISSION DATE/TIME
1001	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1002	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1003	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1004	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1005	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1006	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1007	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1008	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1009	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM
1010	AAYASHI	44	MALE	TRAUMA SURGERY	TC1	DEEPAK AGRAWAL	DR. DEEPAK AGRAWAL	HEAD INJURY	11/01/2011 11:00:00 AM

C.R.M. DASHBOARD (<http://182.71.200.218/aiims/admin/login.php>)

Dashboard CRM is a software designed exclusively for the consultants keeping in mind their busy schedules.

Password protected login is possible by a link on the JPNATC website. A unique profile is created for each user which they can personalize and update as per their requirements. The home screen itself is loaded with all important information like the duty roster, total number of patients admitted and OPD appointments, a graphical representation of the total admission and discharge till date, a call centre helpline number in case of nay problem. In addition to this, specific patient searches can be done and OT list can be viewed for the next day.



detailed log of all the complaints made department wise which are specifically number coded and the remedial actions taken. Various documents are available and can be uploaded from time to time like blood bank addresses, customer care numbers etc.

JPNATC specific details are also available like employee detail, patient detail and daily appointment report for all the other staff apart from the consultants.

There is also comprehensive record of all general queries and appointment queries with the name of the agent who handled the queries.

A detailed list of all the patients currently admitted in JPNATC is available for the convenience of the consultants.

This system is , boon for all the consultants. Technology has brought them closer to their patients

On the CRM, there are also additional features like categorical description of all staff employed in JPNATC, list of all departments with names of HODs, their schedules and timings,

TC No.	Patient Name	Age	Gender	Diagnosis	Ward	Admission Date	Discharge Date
20076	AHL KUMAR	35	MALE	OPR	TC1	11/01/2011	11/01/2011
20078	AHL KUMAR	41	MALE	FRACURE HANDED SHIRT LEFT	TC1	11/01/2011	11/01/2011
30013	AHL KUMAR	44	MALE	SOFT TISSUE INJURY RT HAND	TC1	11/01/2011	11/01/2011
32084	AHL KUMAR	21	MALE	Diphtheria	TC1	11/01/2011	11/01/2011
32027	AHL KUMAR	20	MALE	SOFT TISSUE INJURY	TC1	11/01/2011	11/01/2011

Admission Details	
Admission ID:	100012
TC NO:	307939
Patient Name:	AAYASHI
Ward:	TC1 WARD
Bed:	5
Faculty:	DEEPAK AGRAWAL
Admission Reason:	Head Injury



INTEGRATED ADMISSION DISCHARGE SOFTWARE– EWD

(<http://172.16.23.238/ewd/jpnatc/login.ewd>)

Background: With an aim to update, simplify and streamline the admission– discharge procedure, a new software was introduced by GTI infotel functional since January 2013 after months of extensive studies and trials.

Practice Information Management Software (PIMS) provide the day-to-day operations of a medical practice. Such software frequently allows users to capture patient demographics, schedule appointments, maintain lists of insurance payers, perform billing tasks, and generate reports. PIMS is integrated to VistA EHR. PIMS is used for administrative and financial matters.

Benefits: Although not still in use for billing and insurance, the software is unmatched due to its various practical utilities such as:



CPRS. Each new registration is readily updated in CPRS.

- Admission of patients– Patient information can be updated and printout obtained for Face sheet. Bed No is allocated in software itself which is reflected promptly in CPRS.
- Discharge/Death information can be updated and print out is obtained. Bed is automatically shown vacant on discharge/death.
- Transfer of patients both ward to ward and bed to bed. Vacant beds are shown automatically

for updating by the user.

- Appointment Scheduling
- MIS Reporting-MIS report is available in PIMS report. PIMS has both pre-setup reports as well as allow users to design their own, ad-hoc reports.
- Reports like total registrations, total MLCs, triage information for any particular day/shift is easily available at just a click.
- Patient information can be updated anytime during the course of hospital stay in case any corrections need to be made.



- Easier Patient Registration– allocation of unique TC no and obtaining registration slip and also re-issue of slips for follow up patients.
- Integration with

E EXEMPTION (<http://172.16.23.11/JPNATC.COM/newpage.aspx>)

Background: Getting payment exempted for unknown, unattended and payment deferred patients has always been a daunting task for the nurses. The system consisted of getting the form manually filled by the SR on duty then sending it for counter sign by the consultant, Duty officer, Social Worker and then the final approval by the Chief. Sometimes it would take days for an approval to see light of the day.

Though the process has remained the same, a major break through has been the implementation of the online payment exemption which came into effect from . Login ID and password is provided separately for nurses, doctors, consultant, duty officer, social worker and the Chief. The Trauma nurse Co-ordinator along with NIS is responsible for the implementation of e-exemption

Benefits:

- Exemption can be made online for bed charges, radiological studies as well as implants.
- Manual system is absolutely done away with so there is no need to send HA/SA to get the forms signed.
- Absolutely hassle free and user friendly.
- Once a request is being made, a notification is automatically sent to the concerned authority for approval.



- A unique reporting tab facilities prompt viewing of the status of the request. Its very easy to identify where the approval has not been made. All a nurse has to do is to call up the concerned person and verify.
- Once the final approval has been made by the Chief Office, a print out is sent to the concerned ward/ICU.
- This process is quick as only a click of the button is enough.
- Extremely easy to follow up.

- Helpful in calculating the total cost incurred by the hospital in various studies nad implants.
- Also useful in finding, how much studies or implants are used department wise.

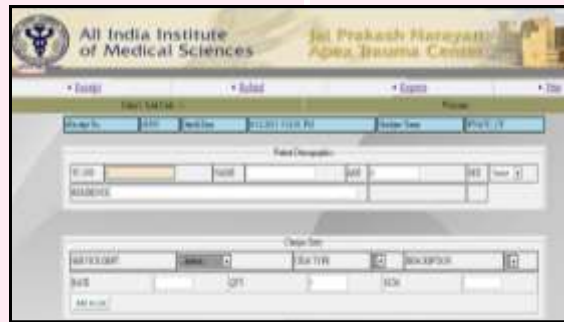
Compliance: It is 100% hospital wide as only online payment exemption is acceptable. Manual forms are rejected by chief office if sent by mistake.





CASHIERING AND BILLING SOFTWARE

Background: Cashiering and Billing software standardizes cash handling for all departments on one centralized system, integrating payment collection and processing across departments and producing one set of financial records. This unique software implemented from has made handling finances easier and transparent.



made being shown on top.

- The system is transparent. Prevents any fraud/duplicacy.
- Since it is computerized, there is less chances of human errors.
- Costs for each test, bed charges, implant etc are already programmed so there is no need to refer to any other charts or memorization.
- Advanced reporting tab makes it easier to estimate the total income and expenditure for any day/month/year.

Benefits:

- By implementing a cashiering solution that stores all departmental transaction and payment activities in a single consolidated database, organization benefits from simplified and more accurate reconciliation, extensive reporting, faster revenue collection, and improved cash flow.

year.

- Information for the purpose of audits are also readily available.
- The system is tamper proof as it is installed only in the cashiering department and access is controlled for authorized personnel only.

Compliance: Implemented successfully at JPNATC.



- The software is fast and very user friendly. There is no need to type anything except just the TC no. all other parameters for which a payment can be made are already incorporated in the template, just needs to be selected by a click.

- Billing made till date is displayed as a consolidated chart with the latest transaction



SCANNING OLD FILES

As a leading healthcare service provider, it is the responsibility of the the institute to safeguard all patient information including recording and reporting.

Although the medical record department is responsible for keeping the patient files and records safely, the computer facility has done a commendable job by providing expertise in keeping a soft copy also of all patient files.

A very simple and yet very useful use of technology has made this task possible. Printers and scanners are available hospital wide atleast one in each department. A data entry operator is also assigned a particular department. All that a DEO has to do is to scan

patient file at the time of discharge/ death. Once a file has been scanned, it is then uploaded in CPRS against the patients TC no. At present, all inhouse patient files is being scanned by the respective DEO of the concerned department at the time of discharge/death. The discharge and transfer out files are being scanned by the DEO the next day and uploaded in CPRS.



A unique initiative in this regard by the MRD in collaboration with the Computer Facility was the scanning of old files. It was started in September 2012 and till now all the old files have been scanned and archived in CPRS beginning from 2008.

Benefits:

- Prevents loss/damage/ theft.
- Easy to retrieve data.
- Simplified search by just entering TC no.
- Controlled access– scanned files are accessible to authorized personnel only.
- Long term benefits and archiving year wise.
- Expenditure is less as scanners are easily available.
- **Doesn't require physical space.**
- Easy back up.
- Does not require much expertise as any DEO can be easily trained to scan.
- **Doesn't require much time to create an online record.**

Thus a simple use of technology can benefit in keeping records safe in the long run.



WHO CHECKLIST

Surgical care has been an essential component of health care worldwide for over a century. As the incidences of traumatic injuries, cancers and cardiovascular disease continue to rise, the impact of surgical intervention on public health systems will grow.

WHO has undertaken a number of global and regional initiatives to address surgical safety. The Global Initiative for Emergency and Essential Surgical Care and the Guidelines for Essential Trauma Care focused on access and quality.

The focus of the Challenge is the WHO Safe Surgery Checklist. The checklist identifies three phases of an operation, each corresponding to a specific period in the normal flow of work: Before the induction of anaesthesia (“sign in”), before the incision



In this regard, WHO checklist was implemented in JPNATC since

The OT nurses have been working diligently to ensure the checklist is being filled before each surgery. The shift incharge is responsible for the compliance. The ANS also ensures the checklists are duly filled.

The training and the forms are provided by the Nurse Informatics Specialist.



of the skin (“time out”) and before the patient leaves the operating room (“sign out”). In each phase, a checklist coordinator must confirm that the surgery team has completed the listed tasks before it proceeds with the operation.

The current compliance rate is around 70%. Training and efforts are being channelized to ensure 100% compliance.

Thus, by following a few critical steps, health care professionals can minimize the most common and avoidable risks endangering the lives and well-being of surgical patients.

Compliance: It is 84.26% for the department of surgery nad 76.1% and 77% for orthopedics and neurosurgery respectively.

ACHIEVEMENTS OF NIS

A new program called Nursing Informatics Specialist Program (NIS P) was started in JPNATC wef 1st February 2011. We are supporting the medical and non medical staff in delivery, documentation, administration and evaluation of patient care and prevention of diseases in all the levels of healthcare by information systems. Nurse informaticists combine their extensive nursing experience with technological advancements to ultimately ensure better patient care, a cornerstone principle of nursing.

Achievements :_ NIS are posted in ED round the clock to help the nursing and medical personnel .When a new software is included in a department the main success lays when it is 100% implemented. Here the role of NIS is very vital. Providing hands-on training to medical & nursing personnel in their own departments, conducting continuous training sessions till they become user friendly is provided by the NIS. The developments in healthcare settings of JPNATC after the implementa-

tion of NIS since 2011 reveals that they are becoming an essential part of the hospital .In addition to the day to day responsibilities we are organising various conferences, workshops and CMEs and cultural programmes .we are also actively participating in research papers and have presented in various national and international conferences and has won awards .





ACTIVE ROLE OF N.I.S. IN ORGANIZING CONFERENCE, WORKSHOPS AND C.M.Es



Department of I.T. and Nursing Informatics Specialist has been involved actively in organizing various conference, workshops and CMEs on a regular basis for doctors, nurses as well as technicians

under the eminent guidance of Dr Deepak Agrawal, Associate Professor Neurosurgery and Head IT.

Various training programmes initiated and conducted by NIS include:

- Cost Effective Use of Technology in Emergency Healthcare– Conducted twice



in the year 2011 and 2012. 3rd International Conference scheduled for 5th-8th September, 2013.

- AIIMS-REAP: Workshop on Research, Ethics and Publication for Nurses A major goal of this

course is the ability to conduct research and development of effective technical writing skills. Already conducted five times since its inception in June 2012. Next workshop is scheduled for 10th August, 2013.

- AIIMS-PDCP: Workshop on Personality Development, Communication and Presentation Skills for Doctors and Nurses. A workshop to improve interpersonal and presentation skills. This workshop has been conducted six times till date including a



special session for delegates from Sri Lanka. Next workshop is scheduled for 13th July, 2013.

- AIIMS-KISS: Keep It Simple Sonography is a workshop on Ultrasound for Neurosurgeons and NeuroNurses. This unique workshop is offered to Neurosurgeons who are interested in unleashing the power of ultrasound for everyday use in ED, ICU and most importantly in the Operating room.



It was conducted on 17th December, 2012 under the aegis of Neurocon2012 organized by Neurological Society of India.

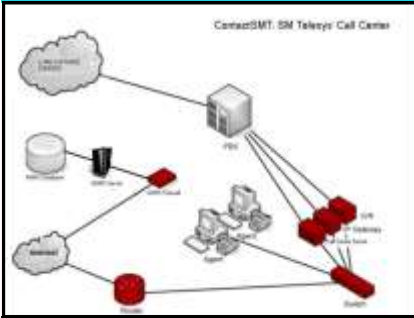


- Operative Workshop and Symposium on Complex Spinal Trauma: This workshop with a unique teaching format consists of case discussion with experts, discussion of pertinent anatomy, saw bone demonstration with live overhead projection, review of JPNATC experience for each case type, live operative session. Conducted thrice from 2011 to 2013. Next workshop is scheduled for 10-14th May, 2014.





IMPROVING TRANSPARENCY & ACCOUNTABILITY: DEPARTMENT AUDITS ON www.jpnatc.com!



Network architecture of the project

Background

The project was conceptualized to set a benchmark for accountability and transparency in public funded healthcare in India. There is a common perception that government hospitals are providing suboptimal care to the citizens and to some extent this is true.

Being funded by taxpayer's money, accountability and transparency leave much to be desired in government hospitals in India. There are some hospitals that are overburdened and on the other hand, there are some which remain empty in spite of being 'fully functioning'.

We have dealt 12 multiple casualties.

DATE	INCIDENT	NO OF VICTIMS
20/08/12	RTA on Ramen Saran Park III (East Wadia & BLS)	6
4/09/12	RTA on road between two RTV's	8
18/09/12	RTA on road over a bridge	13
19/09/12	RTA on road on top of RTV with bus	13
19/09/12	RTA on road between	8
26/09/12	RTA on road on side of road of 3 cars and then one car ran over 4 pedestrians	8
29/09/12	RTA on road on side of road with car on	1
27/08/12	RTA on road in a road (Mumbai)	5
4/09/12	RTA on road in a road	10
18/09/12	RTA on road in a road	12
14/10/12	RTA on road between	6
16/10/12	RTA on road on side of road	5
21/10/12	RTA on road	14

As a small initial step, we wanted statistics on the number of patients coming to a hospital, as well as number of patients being admitted and discharged be available online publicly in a real time manner or as close to real-time as possible.

This would make the overall working of a hospital transparent to the public. A second objective was to internally audit the clinical performance of each department and also have this audit available online publicly so that it could be compared with other hospitals in India & abroad.

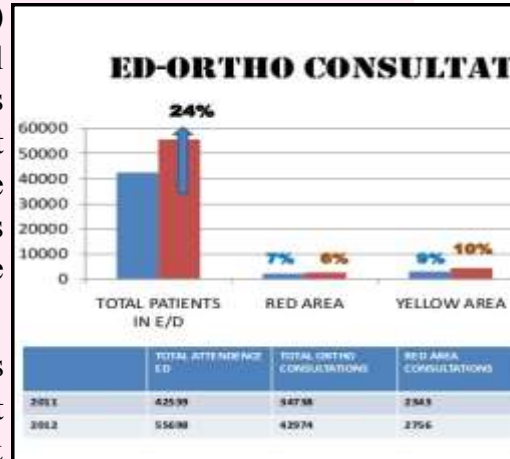
The following features are currently active:

The following features are currently active:

1. Live (real-time) statistics on the total number of patients seen till date at JPNATC and the number of patients seen today on the home page
2. On the statistics page, department wise admissions & discharges for the previous day as well patients seen in OPD (Clinics).
3. On the Education-audit page, clinical audit for all departments in JPNATC evaluating the performance on various clinical and administrative measures.
4. All the above statistics are available publicly without any



LIVE statistics on the number of patients



XRAYS

	NUM
CASUALTY	4409
OPD	7374
WARD	3789
PORTABLE	2207
TOTAL	7739



IMPROVING TRANSPARENCY & ACCOUNTABILITY:

DEPARTMENT AUDITS ON www.jpnatc.com!



As seen till date and today

restrictions

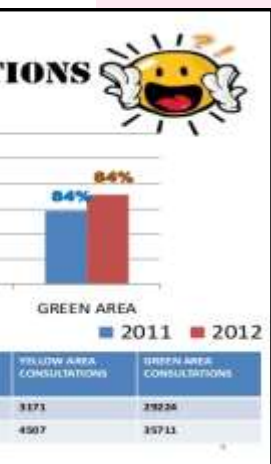
An integrated CRM on the home page (login required) which displays personalized data for each clinician like patients admitted under him/her, Patients scheduled for OPD and departmental data.

Impact of the project:

It is for the first time in the world that

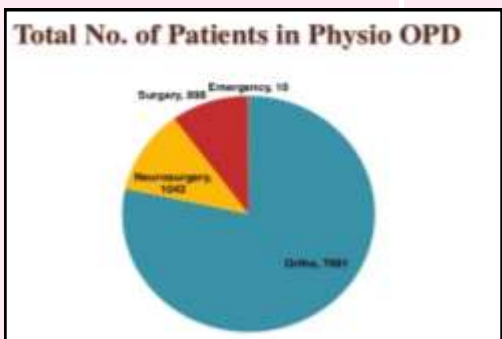
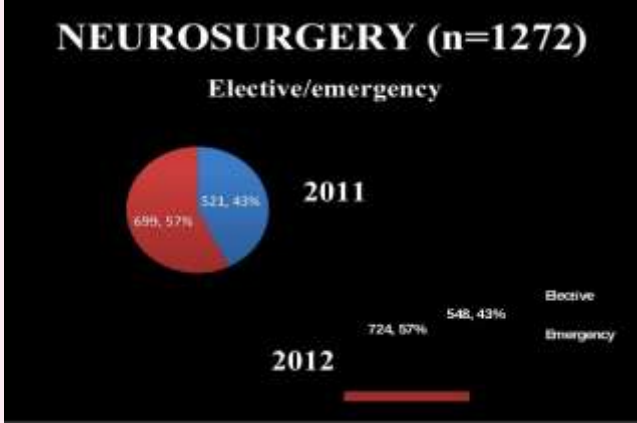
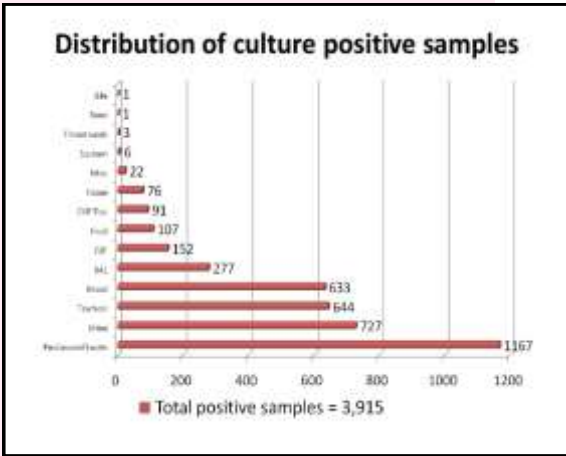
such a project has been conceptualized and implemented. No other

healthcare facility anywhere has allowed itself open to scrutiny in such a global manner where real-time statistics on patient flow as well performance audits of each department are available for all to analyze, compare and criticize (if needed). This will lead to a paradigm shift in the level of accountability & transparency previously maintained at public funded hospitals. Following



The project is meant for:

1. Public: common citizen who can access the data and see how his/ her tax money is being utilized. Patients will have a choice to go to a hospital that has the best clinical audit.
2. Other Government/ private hospitals: Benchmark their clinical performance against our audit and compare patient flow in their hospital with ours.



Governments: Seeing the success of our project, various state governments can similarly make it mandatory for having data & audit available online for hospitals under

successful implementation of the project, we foresee that other hospitals will be forced by the public/governments in similarly releasing data online so that their performance can be evaluated and compared, not only quantitatively but qualitatively. We believe that our implementation has the potential to revolutionize the delivery of healthcare in India.

Comparison DATA Year 2012 Vs Year 2011			
Indicator	Year 2012	Year 2011	Difference
GDR	19%	22%	3% ↓
NDR	07%	10%	3% ↓
BOR	86 %	78%	8% ↑
ALOS	11 days	11 days	-
BTOR	29 pts/bed	25pts/bed	4pt/b ↑



PHILANTROPIC WORKS BY DEPARTMENT OF INFORMATION TECHNOLOGY

Life Size Glass Painting by famous Painter in JPNATC



MS. MANU SINGH

“A thing of beauty is a joy forever”. A hospital ambience goes a long way in encouraging a patient and their relatives in times of difficulties. An understanding smile by the staff, an empathetic attitude and a calm and peaceful environment can ease the pain and suffering..

To provide a ray of hope and peace to the patient’s relatives , beautiful life size glass paintings have been put up along the waiting hall near the ambulance bay.



These masterpieces were made by the Famous painter Ms. Manu Singh .

She completed her post graduation from Uni-

versity of Lucknow and joined the University of Geneva (Design & Art Dept), Switzerland. Her works have been selected in the Annual Exhibition of AIFACS in 2009, Annual exhibitions organized by Camlin in the Professional Category in 2009, 2010 and Switzerland Contemporary Design & Art FAIR 2011. She has awards from Institute of Art & Design, Geneva, Switzerland(20100 to her credit. Presently she is settled Delhi & conducts various art Camps.

The paintings were made as a donation and a token of love to JPN apex Trauma Centre and accident victims.

JPN apex trauma Centre would be forever indebted to Ms Singh for her kind gesture.



GREEN SOLACE



Plants make you feel good. You only have to look at one, run your fingers through its leaves or smell its flowers to know that. Studies have shown that plants Clean the air by absorbing toxins, reduce the physical symptoms of stress and reduce dust pollution. Moreover, scenes of nature lower stress levels, facts that have both economic and healthcare implications.

Beautiful flowering and non flowering plants and ferns have been placed in the corri-

ridor and waiting area of neurosurgery ICU to infuse an environment of hope, peace and healing. Not only do these green friends improve the landscape but also are a source of solace for the grieving patient’s relatives.

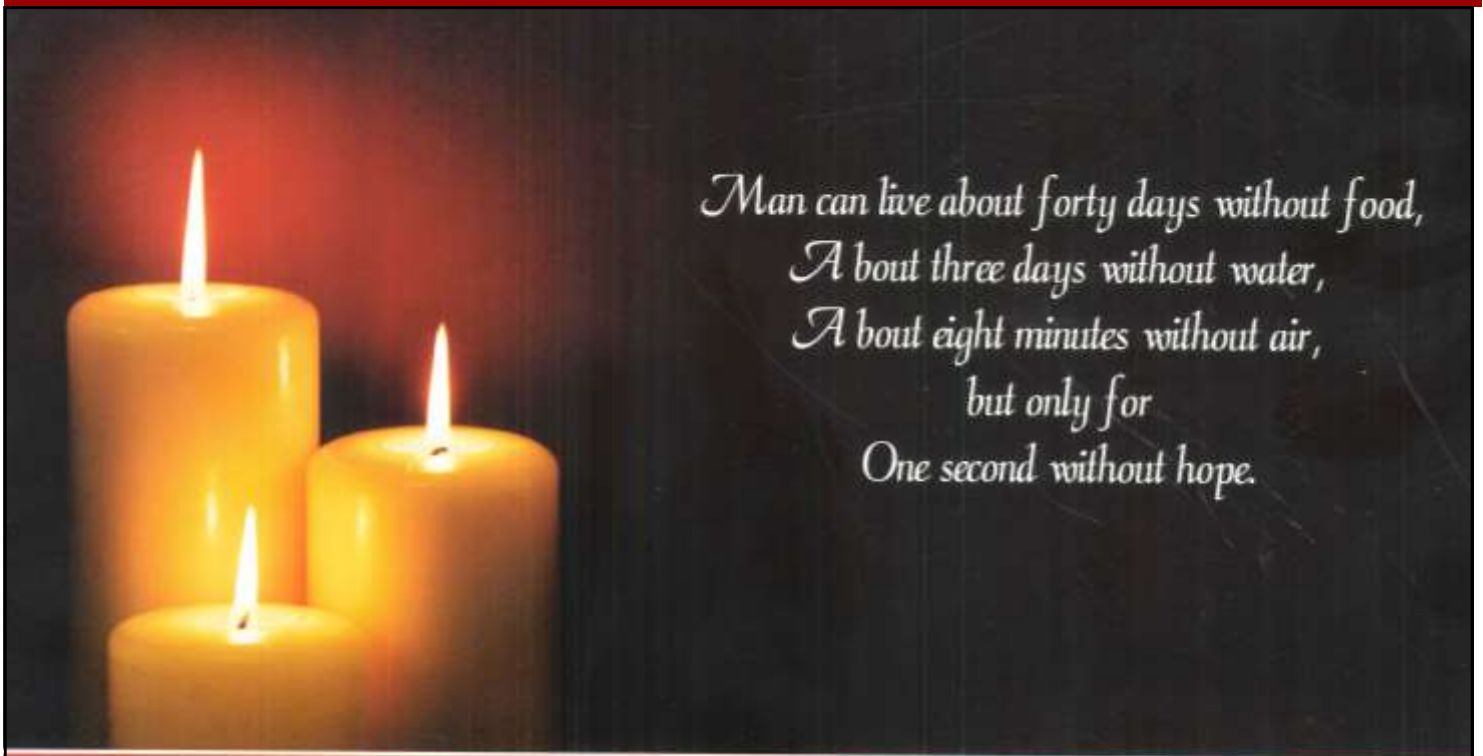
These plants are well maintained by the staff of Neurosurgery ICU.





PHILANTROPIC WORKS BY DEPARTMENT OF INFORMATION TECHNOLOGY

POSTERS- PEARLS OF WISDOM AND A GLIMMER OF HOPE



Motivational Massage outside Neurotrauma ICU



For your loved one, will you accept
Spurious Medicines ?
Substandard Equipment ?
Untrained Doctors ?

आपके अपनों के लिए, क्या आप स्वीकार करेंगे
नकली दवाएँ ?
घटिया उपकरण ?
अप्रशिक्षित डॉक्टर ?

Pledge to say no to corruption- TODAY!

आज ही शपथ लीजिये – भ्रष्टाचार नहीं करना है।

JPNATC- For a Corruption Free India

जे प्र न ए ट्रौमा सेन्टर- भ्रष्टाचार मुक्त भारत के लिए।



Be the Change You Want to See in the World

जगत में बदलाव देखने के लिए पहले खुद बदलें।

Poster displayed in front of OT depicting an important message of JPNATC against corruption

RECOGNITIONS.....



JPN Apex Trauma Centre's m-health initiative of decreasing queues and chaos in OPD using innovative technologies and the ubiquitous mobile phone was awarded the prestigious **mBillionth award south Asia 2010** in

M-Health.

Within one month, JPNATC added another feather in its cap by winning the **eIndia 2010 jury's choice award in mGovernance**. Dr Deepak Agrawal, In-charge IT, JPNATC and Mr Rohit, CEO, SM Telesys Ltd received the award on behalf of AIIMS in Hyderabad. **Prof Misra, Chief, JPNATC** said he was extremely happy with the performance of the IT department in JPNATC & this proved that



government hospitals can provide leadership in IT in India. Moreover this year again we won the **Best Jury award for Online health-care provider for the project 'Integrated online portal for AIIMS Trauma centre'** at E-health world Expo 2011, 1-3 August ,



New Delhi

Year 2011-2012 was not far behind in carrying forward the legacy of winning awards like the eINDIA 2011 Award for the Best ICT-enabled Hospital of the Year.

The winning streak continues as Trauma centre is named the best Hospital one after the another in various conferences held across India.

JPN Apex trauma Centre is the proud recipient of eIndia Awards yet again. The award was conferred for the Innovative Use of Technology by the Hospital for the project- Automated



Tablet based Clinic(OPD) with messaging system and web portal – Mcura in the eINDIA

health awards category. The award ceremony was held in the Pearl city of Hyderabad on 24th July,2013. Ms Metilda Robin, In-charge Nurse Informatics received the award on behalf of Trauma Centre.

The concept which won the award was the innovative use of Samsung tablet (with stylus) and intuitive software. it is now possible for clinicians to see the appointments for the day, individual patients previous hospital records, take clinical photographs & videos with built in camera, see PACS & lab reports, write notes & prescription using the stylus and get print out of the 'handwritten' notes for the patient from a single device.



Best Jury award for Online health-care

