

AIIMS COMPUTERISATION NEWSLETTER



Upcoming conferences
"CEUTEH 2016"



Director's Message

2015 has been a watershed year for AIIMS for computerisation as we achieved significant success in implementing various initiatives and streamlined our processes & workflows for the better-

ment of patient care, teaching and research. The feather in our cap remains the implementation of the online appointment system which has set a precedent for other hospitals to emulate and consolidated AIIMS, Delhi's pole position in healthcare IT implementation in India.

I take this opportunity to compliment all AIIMS Faculty, Nurses, Karmcharis, Administrative Staff, technical staff to have immensely contributed towards success of IT implementation. I would like to particularly mention the pivotal role played by Computer Facility and NIS.

The new year brings new challenges and we are very enthusiastic about implementing ERP (Enterprise resource planning) solution at AIIMS, Delhi. This will bring greater synergies in resource (inventory, accounts & HR) management, research, student and faculty lifecycle management leading to AIIMS being the only public funded healthcare institution to have this capability in this region. All this has been only possible due to support from all of you and I would take this opportunity in wishing you a very happy and fulfilling new year ahead. Let us contribute towards our institute and Nation Building in our own way whatever positive we are doing.

God bless humanity, God bless AIIMS Family.

MC Misra

6th International CME,

Workshop & Conference on Cost Effective Use

Of technology in e health care

and 4th annual conference of SCEUTH

8th -10th September 2016

Preconference workshop

3rd-8th September

MAIN CONFERENCE

- ⇒ Ultra early bird up to 30 December 2015- Rs-2000/-
- ⇒ Early Bird upto 30 June -Rs-3000/-
- ⇒ After 30 June - Rs.4000/-
- ⇒ Accompanying person- Rs.2000/-
- ⇒ Spot Registration -Rs.5000/-



From Editor's Desk

To parents, there is no greater joy than to see their child grow up and become successful. It similarly give me great pleasure to see 'our baby'- the computerization of AIIMS- take wings, grow and become successful in a short period of two years. It goes without question that this would not have been possible without the support

of our director, Prof MC Misra and because of the hard work put in by my NIS, CF staff, team NIC and external vendors. I can confidently say that this is the lowest cost computerization of a hospital of this size *anywhere in the world* and sets benchmarks in costing, implementation and strategic planning for Information Technology implementation in Hospitals. Our vision was to have a cost- effective successful IT implementation which would serve as a model for nationwide roll out and I believe that that we are on the right path for making this vision successful.

Bhagwad Geeta says: "karm karo phal ki chinta mat karo". A surgeon may do a very good surgery but its outcome is not in his control. This can be seen in every aspect of life- outcome may be expected in a particular way but cannot be controlled. I and my team re-dedicate ourselves to putting in our best in this New Year for further improving the services at AIIMS and have compiled the work of computer facility in the year gone by. Happy reading

Dr Deepak Agrawal

Volume 2: Issue 4

Aug-Dec 2015

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'Arriving at one goal is the starting point to another'

MILESTONES IN COMPUTERISATION

Dec 31 2015: OPD screening module

Dec 15, 2015 Raj Kumari Amrit Kaur OPD shifted to Patient Reception Centre (PRC)

Dec 1, 2015 Local purchase of EHS made online(<http://14.139.245.52/>)

Aug 4, Patient Reception Center (PRC)

Aug 1,2015, Biometric Attendance

April 11, 2015 Main Blood Bank requisition (<http://192.168.15.22/eblood Request/>)

April 7, 2015 Aadhar integration with UHID

March 8, 2015 Cash Card in RPC

Feb 10, 2015 Leukaemia registry(http://192.168.15.22/aml/AM_ENTRY.aspx)

Feb 1, 2015 Mobile app

Jan 27, 2015 eBlood requisition in cardio Neuro centre

Jan 27, 2015 Revamped website

Jan 23, 2015 Live patient appointment waiting dashboard

Jan 23, 2015 Patient Portal on website(<http://192.168.15.6/esp/>)

Jan 10, 2015 MSSO software (Concession form)(<http://192.168.15.35/MSSO/LoginPage.aspx>)

Jan 1, 2015 Faculty dash board(<http://192.168.15.35/facdash/dash1.aspx>)

Jan 1, 2015 Quality assurance module (QAM)(192.168.15.22/egrading)

Dec 1, 2014 e Birth registry in AIIMS(192.168.15.22/ebirth/eBirth)

Nov 1, 2014 Online Employee Health Scheme (EHS) for faculties (<http://14.139.245.52/>)

Nov 1, 2014 Cash card implementation in Main AIIMS.

Oct 1, 2014 e MLC implemented in ED (<http://192.168.15.22/emlc>)

Sept 18, 2014 Bed blocking in private ward(<http://192.168.15.8/ehospital/home>)

Sept 15, 2014 Auto admission blocking implemented.(<http://192.168.15.8/ehospital/home>)

Sep 1, 2014 IVRS Appointment system for OPD pts

Aug 15, 2014 ED coordinator help line number(9868938636) started

Aug 1,2014:All registration counters to act as 'single window' counters for future appointments

July 1,2014:Dietarty module started in AIIMS (<http://192.168.15.8/ehospital/home>)

May 14 ,2014: Whole AIIMS under WIFI coverage

April 16 ,2014: Patient Display System (PDS) in Emergency Dept (<http://192.168.15.22/aiims/pds/pdslogin.aspx>)

March 1 ,2014: Computerised Patient Record System (CPRS) in AIIMS

January 3,2014: Online Death certificate (<http://192.168.15.22/aiims/notes/deathnote.aspx>)

December 1,2013: Online Store module in e-hospital (<http://192.168.15.8/ehospital/home>)

November 23,2013: Admission Discharge Transfer(ADT) in e-hospital(<http://192.168.15.8/ehospital/home>)

"What the mind can conceive and believe, it can achieve"

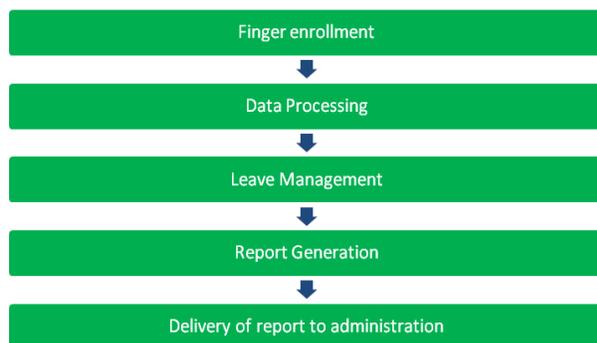
BIOMETRIC ATTENDANCE SYSTEM, LEAVE MANAGEMENT AND DUTY ROTA

The development of an attendance management system using biometrics helps in efficiently managing the attendance and manpower of the institution. It can drastically decrease the use of stationary and can help in time management.

In a tertiary care hospital like AIIMS which has 2300 beds, the total number of staff exceeds 20,000 (permanent, adhoc, students) and it is very difficult to manage the attendance and leaves of the employees. An electronic database which deals with the attendance of the staff can reduce the burden on administration regarding the staff management and leave records.

The biometric attendance system was deployed on August 1st 2015. A total of 50 machines were installed in the hospital premises. Secured networking and cabling was done for the machines and staff were enrolled within a period of 2 months. These biometric machines are fitted with cameras to avoid any malpractices. Recordings are periodically retrieved. The status of machines can be checked online in any system connected to intranet.

WORKFLOW OF BIOMETRIC ATTENDANCE SYSTEM



1. Finger enrollment

Fingerprints are a form of biometric identification which is unique and does not change in one's entire lifetime. Our attendance management system was based on fingerprint technology. It consists of two processes namely; enrolment and authentication. During enrolment, the fingerprint of the user is captured and its unique features are extracted and stored in a database along with the users identity as a record. During authentication, the fingerprint of the user is captured again and the extracted features are compared with the stored template to determine a match before attendance is made.

2. Data Processing

The enrolment ID with details of the employee was encoded in to the star web DC software by the programmer and the nurse informatics specialist. The registered ID is mapped

with the location of the system to retrieve the desired output.

3. Leave Management

The details are further coded based on the departments, designations, sections and grades in to the star link and the shifts are assigned to retrieve the in and out details of the employee. This star link has unique username and password to avoid any misuse of the system. All leaves received manually are entered into the star link along with the scanned copies which is uploaded in the in house software for further references.

Software has been made for capturing the duty roster of each employee and integrating it with the biometric system and adding an SMS gateway. This will help in automating the process of sending SMSs to each employee who has not punched in his/ her duty and also has not submitted leave application.

4. Report Generation

Leave reports can be retrieved from the system for the individual employee or for the entire department. During report generation the reports are checked and if leaves are not updated then a notice will be sent to the concerned employee and officer in charge of that department manually and in future an auto generated SMS will be sent to the phone number linked with the Biometric ID.

5. Delivery of report to Administration

Absent reports are send to the administrative department in case of not producing leave within the stipulated period. Hence they may be marked officialy and salary may be deducted or leave may be reduced , if available.

DUTY ROSTER

The duty roster will be linked to the biometric attendance system and punch in time ,punch out time and leaves will be displayed in the duty roster which will ensure transparency in the system . All the leaves are updated in the system from computer facility and will be linked to duty roster.



Future plans:
Aadhar linked biometric system

LAUNDRY MODULE

Laundry module has been introduced in AIIMS to make the laundry process simple and user friendly. Through this module all the laundry activities like stock, issue, condemnation etc will be maintained online. Sister in charge of the concerned ward can generate indent of the required quantity of linen, gown, draw sheet etc.



Online laundry module

Advantages:

- Time saving and reduced paper works.
- Clean and adequate quantity of washed linen.
- Supply on regular basis and better accessibility
- Proper and organized flow of work and is user friendly
- Helps in auditing which ensures transparency in the system.

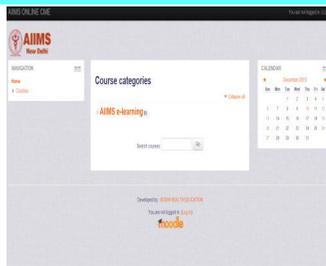
EHS ONLINE INDENT

EHS online indent is an extended service from computer facility which has been introduced for the faculty, accessible from anywhere in AIIMS and also from home via the AIIMS website. Doctors can prescribe medicine online and can view the list of medicines and their available stock in EHS pharmacy in real time. Medicines which are not available in EHS pharmacy can be intended for local purchase. LP process have been streamlined with EHS pharmacy so that indent can be made online. Online indent for local purchase is available in the EHS counters also, If the indent is generated before 1.00pm the item will be issued by evening 3.00pm and if the indent is generated after 3.00pm, item will be issued next day morning.



e LEARNING MODULE

e learning is a new initiative from computer facility in collaboration with Bodhi Health Education to provide online continuous medical education. This module is currently for nurses which helps them to update their knowledge.



e learning home page

e learning works on moodle platform which is an open source platform that provides personalized learning environment for the users. The user can access it at www.aiimsdelhi.org both from intranet and internet. Every user has a unique user id and password with which they can access their profile.

The modules onboard are infection control part I and part II, Glasgow coma scale, Central venous pressure and Computerization. Each module has a pretest, chapters and a post test and user has to complete the pretest before moving on to the chapters.

After logging in the user has to enroll themselves to a particular course by selecting 'enroll me' option. Pretest has only one attempt with a time limit of 15 minutes after which the system auto submit it. Post test has two attempts and is conditioned in such a way that the sec-

ond attempt opens only if the 1st attempt score is below 60%. Computer facility is also awarding certificates for the users who score above 60%.

Our future plans are to start modules on CPR, cardiac arrest, Diabetes and Hypertension.

e learning module will also be started for all newly joined residents (SRs and JRs) of AIIMS on various modules like orientation of AIIMS, CPR and cardiac arrest module.

ROLE OF NIS:

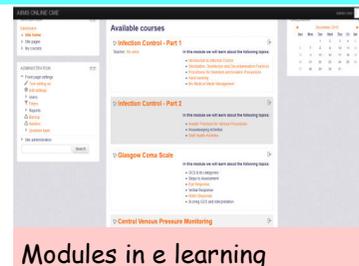
Providing training to the staff for smooth functioning of the software.

Coordination with faculties for developing the teaching material.

Providing the usernames and passwords for the users.

Provide assistance 24x7.

Assistance in distribution of certificates.



Modules in e learning



Certificate

"The journey towards success is not possible without the fuels of determination and perseverance."

AIIMS OPD TRANSFORMATION

AIIMS OPD transformation is the first model project using innovative process techniques benefiting more than 3 million patients visiting AIIMS every year. In our constant endeavor to make AIIMS patient friendly, Dr.

Deepak Agrawal (Chairman Computerization AIIMS) and his team have successfully introduced processes and systems that have significantly enhanced patient experience in OPD. This was possible by keeping abreast of technological developments in this digital age and taking the benefit to all the sections of the society, with tremendous support from Tata Consultancy Services.

Patient Reception Counter was started on 4th August 2015 and the RAK OPD roll out was completed by 5th December 2015. When patients with or without appointments visit PRC they are directed to different counters. Patients who have taken appointment from various means like patient portal, call centre, IVRS, mobile app are directed to fast track pavilion. Patients without appointment are directed to UHID creation pavilion for UHID creation or current booking pavilion for current slots (if available) or they are given future appointments. Once the appointment is confirmed patients are directed towards waiting hall. Various color coded wrist bands are assigned



to patients based on appointment status. Orange wrist band for patients without appointment, blue wrist bands for patients with appointment and purple wrist bands for relatives.



The working hours for various counters are:

UHID creation pavilion:

Entry timings-8.00am-10.30am, 11.30am-12.30pm, 1.30pm-3.30pm.

Current booking pavilion:

8.00am-10.30am -patient registration (without appointment)
11.30am-12.30pm-future appointments, 1.30pm-3.30pm-clinics and afternoon OPD and future appointments.

Fast track pavilion:

8.00am-10.30 am -patient registration (with appointment)
11.30am-12.30pm-future appointments
1.30pm-3.30pm-clinics and afternoon OPD and future appointment.

Cards for EHS and EHS known to will be made at EHS facility. **PUBLIC ADDRESS SYSTEM:** This is an electronic sound amplification and distribution system, used to allow a person to address a large public.

LAUNCH OF AIIMS OPD TRANSFORMATION PROJECT

The AIIMS OPD transformation project was launched on 25th of December 2015 in the august presence of Shri J.P. Nadda (Hon'ble Union Minister of Health And Family Welfare and President AIIMS), Shri Piyush Goyal (Hon'ble Minister of state for power, Coal, New and Renewable Energy, Government of India) and Shri B.P. Sharma IAS (Secretary Health, Government of India).

You Tube Link

<https://www.youtube.com/watch?v=rwrN2jFQnco&list=PL5hajD4WNztHARlNc9QFxFzHE1WsVg9jT>



AIIMS Transformation team

AIIMS CHAMPIONS FOR THE PROJECT

- 1) Prof MC Misra-Director AIIMS
- 2) Mr V. Srinivas-DDA, AIIMS
- 3) Dr. D.K. Sharma, MS, AIIMS
- 4) Mr Manjul Rastogi, SE, AIIMS
- 5) Dr Angel Rajan Singh, Hospital Administration AIIMS
- 6) Ms Metilda & Team, Nursing Informatics, AIIMS
- 7) NIC Team, AIIMS



Dr. Deepak Agrawal (Chairman Computerization AIIMS) receiving the Technology Evangelist award for enabling AIIMS Transformation.



Ms. Metilda Robin and her team of Nursing Informatics Specialist were appreciated for being the change champions to enable AIIMS Transformation.

"Being persistent may lead you to the door but consistency is the key which unlocks it."

AIIMS REDEVELOPMENT PROJECTS

EXPANSION OF AIIMS TRAUMA CENTRE



Cost of project: Rs 35 crore
Construction period-18months
Work awarded to Ms.Kumar Infratech and construction Pvt Ltd
Work under progress



SALIENT FEATURES:

- G+7 floors
- Total beds 24ICU,28beded wards,22 private room and OT.
- 51 rooms for faculty, Emergency facility and Conference hall etc.
- Ground coverage-1027sqm
- Area proposed for construction: 7031sqm



NIGHT SHELTER, AIIMS TRAUMA CENTRE



Cost of project: Rs 29 core
B+G+10 floors. Total area:27599 sqm
 A combination of dormitories and rooms is proposed for 325 beds.
 Halls have been provided to take care of night shelter needs in winter.
 A two level centre atrium with large openings on the façade to help in natural ventilation has been proposed.



PROJECTS POISED TO TAKE OFF

EMERGENCY CUM DIAGNOSTIC

GERIATRICS BLOCK, MASJIDH MODH

COST OF PROJECT:Rs 500 crore

Status: Concept approved and statutory clearances under process.

SALIENT FEATURES:

3B+G+9 floors

Total beds :450 approx

Ground coverage:6000 sqm

Area proposed for construction:920000sqm



Initiative of Ministry of Health and Family Welfare under the National Programme for Healthcare of the Elderly.

"Rise and stand up. Hope is everywhere. We can do it."

LIVE STREAMING OF CONFERENCES, SEMINARS AND WORKSHOPS



EAST ASIA SUMMIT

Live streaming or webcasting is a media presentation distributed or transmitted over the internet using streaming technology to distribute the content from a single source to many simultaneous

listeners or viewers through streaming devices.

Once the full streaming is done, the video is uploaded in YouTube so that all users can view it.

Computer facility has already done streaming of the 60th Institution Day of AIIMS, 43rd Annual Convocation of AIIMS, East Asia Summit FAMX India 2015 and ANTC 2015.

All the academic activities, CNE conducted by Computer Facility is live streamed and the videos are uploaded in YouTube.



FAMX INDIA 2015

GLANCE OF COST EFFECTIVE USE OF TECHNOLOGY IN HEALTH CARE (CEUTEH) 2015

5th international CME, workshop and 3rd Annual conference of society of cost effective use of technology in e health care was conducted in All India Institute of Medical Sciences, New Delhi from 4th August 2015 -8th August 2015. Pre conference workshops on Research Ethics and Publication (REAP), Personality development, Communication and Presentation skills (PDCP) and AIIMS Ultrasound Trauma Life Support course (AUTLS). A total of 350 delegates from various parts of India participated in the conference and sessions for doctors, nurses and technicians



Prof. M.C. Misra inaugurating the CEUTEH 2015 conference

were simultaneously held in various venues.

AIIMS HIMSS workshop was conducted on 7th of August 2015 on various themes like OPD modernisation, emergency department management, tele health and remote printing, academics and innovations etc.

Plenary sessions on online appointment system, revolutionising emergency care with IT etc were held during the conference. Various competitions like poster presentation, award paper presentation, quiz competition etc were held.

A FEATHER TO THE CROWN-"SKOTCH AWARD 2015"

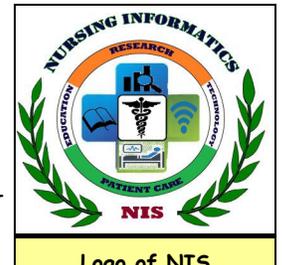
Skoch Smart Governance Award is an initiative recognizing top performing government organizations and organizations working with the government, operating at local, state and national level in the area of Health, Education, Rural Development/Panchayati Raj, Urban Development, Finance, and Security. It is a step towards recognizing the best practices and models of governance for excellent and efficient implementation of programmes and services. AIIMS was conferred this highest independent honor in India for online appointment system and patient portal.



Dr. Deepak Agrawal, Chairman Computerization receiving the Skotch Award on December 2015.

NURSING INFORMATICS SPECIALIST

Nursing informatics specialist (NIS) was started with a mission of digitising AIIMS including all centres on February 1, 2011. Total of 80 nursing informatics are presently working in NIS in various centres. Role of NIS in digitisation caters to various areas which includes direction in developing various programmes along with developers, training to all staff, coordination in implementing the softwares, academics/research, screening patients at Patient reception counter (PRC), emergency nurse coordinator providing assistance to patients 24x7.



Logo of NIS

"A true dreamer is one who knows how to navigate in the dark."

STATUS OF ELECTRONIC MEDICAL RECORDS IN AIIMS

CPRS CONSULTATION FORM AND DISCHARGE SUMMARY

Consultation note through computerized patient record system (CPRS) is another initiative for making the patient consultation process transparent reliable and efficient. This was made compulsory from December 2015 in all departments of AIIMS.

Discharge summary is a vital information of patient's course of stay in hospital, for the easy retrieval of the data computerized patient record of discharge summary was also initiated. The templates as per the requirements of the departments are created by the concerned NIS.

Advantages: transparent system, legible and more reliable, less chances of misplacement.

Role of NIS: providing training to the doctors, creation of usernames and passwords, assistance in developing templates as per the requirements, providing assistance 24x7.

Future plans: paper less consultation, notification in the concerned doctor's profile once consultation is send and online review of the consultation.

DISCLAIMER : COMPLIANCE REPORT OF DEPARTMENTS WHO ARE MAINTAINING EMR IN CPRS

Ward	Department	Admission note	Discharge Note	OT note	Consultation note	Transfer out note	Name of NIS
AB1	ORTHOPAEDICS	Nil	76%	100%	25%	100%	Sajithra/Hema
C1	PSYCHIATRY	Nil	Nil	NA	100%	50%	Sajithra/Hema
D1	DERMATOLOGY	Nil	Nil	NA	100%	50%	Sajithra/Hema
AB2	GASTROENTEROL- OGY	Nil	Nil	NA	75%	80%	Laxmikant/Ashwathy
AB2 ICU	GASTROENTEROL- OGY	Nil	Nil	NA	80%	70%	Laxmikant/Ashwathy
C2	MEDICINE	Nil	Nil	NA	50%	70%	Laxmikant/Ashwathy
C2 ICU	MEDICINE	Nil	Nil	NA	60%	70%	Laxmikant/Ashwathy
D2	MEDICINE	Nil	Nil	NA	50%	70%	Laxmikant/Ashwathy
AB3	OBS AND GYNAE	Nil	100%	Nil	100%	80%	Sangeeta/Navita
C3/LR	OBS AND GYNAE	Nil	100%	Nil	100%	80%	Sangeeta/Navita
C3/NICU A	NEONATOLOGY	Nil	Nil	NA		80%	Sangeeta/Navita
D3	OBS AND GYANE	Nil	100%	Nil	100%	80%	Sangeeta/Navita
AB4	NEPHROLOGY	Nil	0%	NA	100%	50%	Padma/Priya
C4	UROLOGY	Nil	30%	Nil	Nil	50%	Padma/Priya
D4	ENT	Nil	100%	Nil	100%	50%	Padma/Priya
AB5	PAEDS SURGERY	Nil	100%	Nil	Nil	100%	Padma/Priya
C5	PEADIATRICS	Nil	50%	NA	Nil	100%	Nayana/Shikha
D5	PEADIATRICS	Nil	50%	NA	Nil	100%	Nayana/Shikha
D5ICU	PEADIATRIC	Nil	NA	NA	Nil	100%	Nayana/Shikha
AB6	ENDOCRINOLOGY	Nil	0%	NA	100%	80%	Chinmaya/Anit
C6	EMERGENCY	Nil	80%	NA	75%	80%	Chinmaya/Anit
D6	GI SUR- GERY&EMERGENCY	Nil	Nil	Nil	90%	30%	Chinmaya/Anit
D6 ICU	GI SURGERY	Nil	NA	Nil	80%	50%	Chinmaya/Anit
AB7	SURGERY	Nil	Only by Unit II -100%	Nil	Nil	100%	Sushil/Anju
AB7 KTP	SURGERY	Nil		Nil	Nil	100%	Sushil/Anju
C7	SURGERY	Nil		Nil	Nil	100%	Sushil/Anju
D7	SURGERY	Nil		Nil	Nil	100%	Sushil/Anju
D7 HDU	SURGERY	Nil		Rest all -Nil	Nil	Nil	100%
AB8	ANESTHESIA	Nil	NA	NA	Nil	Nil	Sreejith/Sherin
RPC	Ophthalmology	Nil	Done in e hospi- tal	Nil	60%	80%	Onitta
IRCH		Nil	100%	Nil	100%	100%	Yamini/Shailender
NSC		100%	100%	100%	40%	0%	Anita/Harish
CTC		Nil	100%	50-80%	100%	0%	Kumkum/Tenzin