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# DIGITAL AIIMS

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LEADERSHIP AND INSTITUTION BUILDING



**V.SRINIVAS, IAS**

## DIGITAL AIIMS



V.SRINIVAS<sup>1</sup>

### Abstract

The Digital AIIMS project is remarkable for simplification of a complicated hospital governance model of AIIMS. It was feasible because of the synergy generated between AIIMS, Ministry of Health and Family Welfare, Department of Electronics and Information Technology, the National Informatics Center and the Tata Consultancy Services. The Digital AIIMS has benefitted 55 lac patients in the period July 2015 to April 2017. The Digital AIIMS has the largest footprint of Digital India projects, has received a number of leadership excellence awards and has been cited by the Department of Administrative Reforms amongst India's most innovative projects for the period 2015-17. The Ministry of Health and Family Welfare has taken up the Digital AIIMS project for pan India replication, in all Central Government Hospitals. Several State Governments have come forward to take up the project for replication in their State Medical Colleges and District Hospitals. The project's success needs to be gauged in the background that it has been implemented in India's largest functional hospital where the administrative innovations can easily be crowded out by the challenges of day to day governance.

### The Background

1. Rajkumari Amrit Kaur had founded AIIMS as the apex Medical Sciences University of India where the brightest doctors would pursue the trinity of goals of patient care, medical education and medical research. As the AIIMS brand got established and its fame spread far and wide, it attracted patients from all over India – 35 lac OPD patients in 2014-15. With an average of 10,000 OPD patients/day, 35 lac OPD patients per annum, 62 Departments, 3100 Doctors and 6000

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<sup>1</sup> Author is a senior civil servant, an IAS officer of 1989 batch presently serves as Chairman Rajasthan Tax Board with additional charge of Chairman Board of Revenue for Rajasthan, Ajmer. He had served as Deputy Director (administration) AIIMS from 17/4/2014 to 21/3/2017

Nurses, AIIMS represents India's behemoth in tertiary care hospitals. While the Institute comprising of highly driven professionals works with clockwork precision, the overwhelming patient loads have proved impossibly challenging for a manual system and required significant systemic changes in terms of improved digital practices and process re-engineering, as millions of India's population seeks medical care at the Nation's apex Medical Sciences University. Although AIIMS accorded highest priority to every patient and patients were the gods of the Institute, the patient journeys were time consuming, exhausting affairs.

2. In December 2014, my first week in AIIMS, I accompanied the Medical Superintendent AIIMS Dr. D.K.Sharma, on a visit of the Rajkumari Amrit Kaur (RAK) OPD. I saw huge crowds at the entrance of the RAK OPD at 9 am. There were huge crowds at each of the 8 Registration Counters. The stairs were full of crowds and it was with great difficulty that we reached the 4<sup>th</sup> floor where the ENT OPD was situated in a porta cabin space. Outside the 12 consultation rooms there were hundred patients/ attendants. There was a second round registration of patients. OPD spaces on each of the floors of the RAK OPD had multiple registration counters, blood collection counters and several minor operation theaters. There was hustle and bustle at every inch of the RAK OPD.
3. Barely a day earlier, Rishi Dev Kapur, IAS (1966) had visited the ENT OPD and waited almost 4 hours to reach the clinician's consultation chamber. His daughter Pooja, a Joint Secretary in the Ministry of External Affairs shared with me her father's harrowing experience:

"He left home at 730 am on empty stomach, waited for 3 hours in lines for registration at AIIMS. He hoped to see a clinician at 10 am, but when he reached the ENT OPD he was told to return at 2 pm for the afternoon consultation/ tests. He stood in lines all day. There was no clarity on the appointment time, consultation room, consulting clinician. He was pickpocketed while standing in lines at ENT OPD located in the porta cabin and his credit card stolen. The security personnel had difficulty in maintaining order in the lines and constant jostling was witnessed."

Pooja Kapur's feedback brought forth the immense challenges for simplification of AIIMS OPD procedures. She was not the only one who faced the challenges of a poorly functional OPD system. The situation as chaotic and desperately in need of simplification.

4. I also found my office was full of requests for patient appointments and registration. A single request for appointment necessitated 10-15 phone calls for

coordination. Systemic inefficiency had engulfed my valuable and productive work time. Almost all my office staff was busy accompanying patients to the registration counters. Nobody was available in the morning hours in my office. I noticed that not only was my office receiving a huge number of requests, the office of OSD to President, the Director's office, the Senior Financial Advisor's office and every other office was receiving patient appointment requests which overwhelmed all other work. At the same time, clinician's timings were being crowded out by overwhelming patient loads.

5. Following my visit to RAK OPD, I sent a note to the Medical Superintendent seeking his consideration on (a) whether it was possible to close down all secondary registration counters on each of the RAK OPD floors? (b) whether it was possible to close down the multiplicity of blood collection counters on each of the floors and operate merely through the Central Blood Collection Centre? (c) whether each of the patients could be accompanied by only one attendant? And (d) whether a faster system of registration by simplification of the processes was possible? I also requested a meeting with the concerned Heads of Departments in whose OPDs process simplification was an urgent felt need.
6. The Medical Superintendent, Dr. D.K.Sharma, a man with decade long experience and high reputation, convened the meeting with the Heads of Departments, a few days later. Consensus could not be reached on the roadmap forward. I received a 3 page note from the Hospital Administration on the discussions, which said, that while there was overwhelming support that process simplification was necessary, the modalities of process simplification would need to be worked out. A second meeting was convened a few days later in which I participated and reiterated my view that process simplifications were necessary. Besides the individual requests being received in many of the administrative offices needed to be streamlined into a systemic approach lest it derails the entire functional efficiency of administrative offices. Once again consensus eluded us. There was no consensus for closing down the tedious process of second round registration at the Department level. No consensus could be reached on closing down multiple blood collection points. The only area where consensus was reached was in creating an additional waiting space for patients in the 3<sup>rd</sup> floor of RAK OPD. This was built on priority by Engineering Division. The creation of additional waiting areas was an important component of the AIIMS OPD Transformation Project that will be discussed in the subsequent paragraphs.
7. The AIIMS had an e-Hospital project under implementation for many years. The Computer Facility made an introductory presentation to me on the e-Hospital

project in December 2014. Raghu Kumar the Senior Programmer in the Computer Facility and Sudhir Kumar, Technical Director NIC presented the concept and implementation progress of the e-Hospital project. The e-Hospital project was all but dead and nothing was moving forward. Barely 2-3 modules of the total 10 modules were implemented in 5 years. There was no institutional coordination between NIC and AIIMS to take the initiative forward. I was informed that software is designed by the Tripura team of NIC and implemented in AIIMS. There was neither any institutional memory of the stages of implementation or the roadmap forward. It was essential to create institutional coordination structures and mechanisms to enable a patient friendly environment.

8. Dr. Deepak Agarwal, a neurosurgeon and the Chief of the Computer Facility met me that evening after the introductory briefing meeting with the staff of computer facility. He mentioned that he had not met the Deputy Director (Administration) for 7 months, before I had joined. The coordination breakdown was total. The post of Deputy Director (Administration) which was to function as the interface between the Ministries of Government of India and AIIMS had virtually collapsed in this project. The AIIMS was dealing directly with the NIC with neither the Ministry of Health and Family Welfare or the Department of Information Technology being in the loop. Interaction at the Programmer level was not yielding any results. Clearly higher level interventions at the level of Health Secretary and DeITY Secretary were necessary.
9. I discussed the need for process simplification with Director AIIMS, Prof M.C.Misra. He gave me the background of the work done on Digital AIIMS. As soon as he took up the post of Director AIIMS on 11<sup>th</sup> October 2013, the leadership of the computer facility was revamped and Dr. Deepak Agarwal was given charge of the Computer Facility. Further the concept of Nursing Informatics Specialists (NIS) was brought to AIIMS from the experience at JPNATC digitization where Prof Misra, Dr Deepak and Ms. Metilda Robin had worked closely. This was the first time that the NIS concept was introduced and subsequently it was introduced at the Main Hospital. Prof Misra expressed disappointment with the slow progress of the e-Hospital project and said he would any administrative initiative in this regard. It was a promise he kept up, conceiving the whole digitization process and devoting enormous man-hours to successful implementation. Often he stood against severe resistance from patients, senior faculty, nurses and resident doctors who were reluctant for introducing changes. The Director AIIMS displayed leadership from the front.

10. Health Secretary Bhanu Pratap Sharma, IAS (1981) was a strong votary of the digitization of hospitals and the e-Hospital project. When I discussed the e-Hospital project with him, I was promised all support for timely implementation. A lot of bureaucratic leadership credit goes to Bhanu Pratap Sharma for his constant interactions, encouragement and coordination in successful implementation of Digital AIIMS project in the period February 2015 to July 2016.

### **AIIMS – UIDAI Collaboration**

11. The Director General Unique Identification Authority, Vijay Madan IAS (1981) visited AIIMS in January 2015 to meet a patient who was admitted in the Cardio-Neuro (CN) Sciences Center. As we walked through milling crowds to the CN Center from the Teaching Block, I mentioned to the Director General UIDAI that AIIMS was coping with huge patient loads and process simplification was urgently necessary. He felt that linkages between Aadhar numbers and the unique health identification number issued by AIIMS could be considered.

12. I wrote to Vijay Madan requesting a meeting with him to explore the contours of collaboration between AIIMS and UIDAI in the patient registration process. He called me a few days later to the UIDAI headquarters. In the sprawling UIDAI committee room, I and Dr. Deepak Agarwal presented 7 slides, largely depicting the patient loads at AIIMS. Vijay Madan was extremely positive in assuring institutional collaboration between UIDAI and AIIMS. The UIDAI deputed 2 senior software professionals for linking Aadhar numbers with the Unique Health Identification Numbers. A senior IAS officer, Dr. Shreeranjana IAS (1985), the Deputy Director General in the UIDAI was asked to oversee the coordination.

13. A second meeting was convened at the level of Vijay Madan a fortnight later. Tripta Sharma, Programmer in the Computer Facility AIIMS, and Sudhir Kumar, Technical Director NIC deployed at AIIMS accompanied me to UIDAI. The possible modalities of Aadhar seeding on patient registration were discussed and received broad approval by the senior officers of UIDAI.

### **AIIMS – DeITY Collaboration – The Origins of Online Registration (ORS.gov.in)**

14. Ram Sewak Sharma IAS (1978) Secretary DeITY visited AIIMS in February 2015. I sought his time during this visit to brief him about the slow progress of the AIIMS e-Hospital project. A man of immense energy and commitment, Ram Sewak Sharma convened a meeting with the senior officers of the DeITY, the

NIC, UIDAI and AIIMS next morning at 8 am. Tapan Ray IAS (1982), Additional Secretary DeITY, Dr. Ajay Kumar (1984), Joint Secretary DeITY and DG NIC, Rajesh Gera Deputy Director General NIC, Dr Shreerajan IAS (1985) attended the meeting along with Director AIIMS, I, Dr. Deepak Agarwal, Tripta Sharma and Metilda Robin. It was in this meeting that the first steps for designing the online registration system were conceptualized.

15. The meeting with Ram Sewak Sharma was followed by a functional level meeting in the Computer Facility of AIIMS with the Tripura NIC team. That was my first video-conference with Chayan Kanti Dar, the Senior Technical Director NIC, Neel Kamal Dey Purakayastha, Technical Director NIC, Rajesh Gera, Sunil Bhushan Senior Technical Director NIC in the Ministry of Health and Family Welfare, Dr. Shreerajan, Dr Deepak Agarwal and I discussed the operational modalities. There were sharp exchanges on the functional roles between NIC and UIDAI. Thankfully we could resolve the issues and reach a consensus.
16. It was agreed that the patient seeking an appointment at AIIMS could log into the AIIMS OPD Appointment System (ORS.gov.in) and submit a request for an appointment online using his Aadhar number. The verification of the demographic details of the Patient would be based on a one-time password being transmitted to the mobile phone number of the patient registered in the Aadhar data-base. The Unique Health Identification Number gave an Individual Digital Identity to every Patient visiting AIIMS. The Patient could use the UHID for his entire lifetime and every consultation visit was documented by the system. Chayan Kanti Dar and Neelkamal Dey Purakayastha agreed to design the software by end April 2015. AIIMS was asked to coordinate with the Paygov for ensuring that an online payment system is inbuilt into the software. This was a task followed up by the computer facility.
17. AIIMS sought meetings at the level of Health Secretary and Health Minister to outline the roadmap for the Online Registration System. Discussions focused on the quantum of online appointments that would be issued/ day and how many walk-ins would be accepted. It was decided that AIIMS would introduce a cap of 15 percent online registrations for OPD appointments. Another issue that was considered was whether the OPD charges for Online Registration should be higher than the walk-in appointments.

Health Minister J.P.Nadda said

“Patient friendly hospitals were a felt need and AIIMS should provide leadership to hospital process simplification. The software is quite simplistic, forward looking and could be adopted widely. The AIIMS attracts a large number of poor, illiterate patients and the objective should be to have an inclusive digital platform where all stakeholders could benefit. Although, AIIMS had proposed introduction of a higher charge for online appointments as compared to walk-ins, the OPD consultation charges should not be touched at this stage.”

Following these deliberations, the AIIMS was given the responsibility of ensuring timely completion so that the project could be considered for launch during the Digital India week.

18. In pursuance of our discussions in Nirman Bhavan, Secretary DeITY Ram Sewak Sharma chaired 3 more follow-up meetings in Electronics Niketan the run-up to the launch of Online Registration System. The features of the web-page were discussed in minute details. We worked really hard to adhere to the rigid timelines. It was agreed that AIIMS would conduct a trial run of the software in the OPD counters from end May 2015 to ensure that operational logistics are streamlined.
19. The e-Hospital online registration software was operationalized in 10 OPD counters of RAK OPD in May 2015. Two weeks later Rajesh Gera and Sunil Bhushan visited my office to present the findings. The initial results were encouraging. AIIMS was receiving the proposed 15 percent online registration patients. We visited the RAK OPD almost on a daily basis to ensure operationalization of the registration counters. There were no operational glitches in the software. We operationalized 10 counters in June 2015. Health Secretary B.P.Sharma visited the RAK OPD at 830 am in June 2015, he was quite satisfied that the online registration system could be taken up as part of Digital India week launches.
20. AIIMS had generated sufficient institutional positivity and momentum for the successful launch of the online registration system. Nearly a dozen meetings were held at the Secretary level in Electronics Niketan and Nirman Bhavan, there were meetings at the level of Health Minister and DeITY Minister. PMO was fully briefed on the online registration. There was all round support for the project. On July 4, 2015, the Prime Minister launched the ors.gov.in portal for online registration under the e-Hospital project.



21. A week after the launch, AIIMS was mandated to conduct an on-boarding workshop for all the Central Government Hospitals on the online registration system. Health Secretary B.P.Sharma chaired the onboarding workshop, along with Director AIIMS Prof M.C.Misra and the DeITY officials. Each one of us who had worked on the project were warmly congratulated for its successful launch.

### **AIIMS – TCS COLLABORATION**

22. AIIMS–TCS collaboration commenced in April 2015. The Health Minister J.P.Nadda convened a meeting in his Parliament office which was attended by the MOS (IC) Power Piyush Goyal, TCS CEO N.Chandrasekaran, TCS Senior Vice President Girish Krishnamurthy. Director AIIMS Prof M.C.Misra, I and Joint Secretary Medical Education Ali Raza Rizvi also joined the deliberations.

23. The MOS (IC) Power Piyush Goyal discussed the hospital processes at AIIMS. He said he had spoken to TCS CEO N.Chandrasekaran when he was on foreign travel waking him up at a midnight hour seeking his assistance for a CSR project in AIIMS and he had kindly offered to help.

24. Prof Misra had spoken to MOS (IC) Power a few months earlier in this regard.

Prof Misra said that

“NIC is not delivering as per the mandate given to it, and digitization was limited to OPD Registration. There is reluctance to expedite the complete implementation of the processes.”

TCS CEO N.Chandrasekaran said

“Mr. Piyush Goyal ji spoke to me a few days ago about streamlining the AIIMS OPD and a possible CSR Project with TCS. We are ready to take up the challenge of promoting a patient friendly hospital. Our core strength lies as a software company. We have studied the AIIMS for a few days and are in the midst of formulating our strategy”

25. It was decided that the modalities of AIIMS-TCS CSR project would be worked out in the coming days. All attempts should be made to develop collaboration

for simplifying the patient journey. It was decided that AIIMS would collaborate with TCS in the coming months under a CSR project the details of which would be worked out.

26. The TCS brought an ambitious scale of operations to AIIMS. TCS brought in management graduates and software professionals – 4 of them stood out, H.S. Shenoy, Srihari, Shashikant Dixit and Colonel Sanjay Kapoor. Assisting them were a large number of young professionals who stood out by their dedication. The focus was on changes in management practices. The TCS teams met me almost on a daily basis to firm up the systemic changes that they sought to incorporate.
27. By end May 2015, we could identify a roadmap for collaboration under a CSR project that comprised the following – AIIMS OPD Transformation including deployment of manpower and equipment, Implementation of ERP solutions in AIIMS and development of Electronic Medical Records. The phase I of the AIIMS – TCS MOU was presented to Health Minister and MOS (IC) Power.
28. The TCS film on the state of affairs in AIIMS OPD reflected the realistic side of AIIMS. I saw the film and said “*the film presents a very negative side of AIIMS, and needs moderation. It cant look this bad.*” That was how difficult reality was, even on film. The film showed people who were lost, looking for help to reach the destination, the absence of signages making the patient journey complicated, crowding at every counter – crowding at blood collection centers, crowding at registration counters, crowding on the elevator lobbies, crowding on the stairs – a state of chaos all over the OPD areas. The TCS model was very innovative and interesting.
29. Both the Health Minister and the MOS (IC) Power were willing to support the proposal presented by Girish Krishnamoorthy. The proposal envisaged the creation of a patient registration center, waiting hall, creation of additional patient waiting spaces, patient care coordinators. AIIMS was to provide the Security personnel and Data Entry Operators for the enlarged registration counters. It was a manpower intensive model as with all Health Systems projects. The TCS model was to be explained to all the stakeholders in the AIIMS value chain through a series of orientation meetings. These meetings were organized in the early morning hours at 730 am so that all stake-holders would attend to OPD from 9 am. The Director and I attended almost all the meetings. In-house discussions were encouraged so that process changes could be best identified

for introduction. Girish Krishnamoorthy showed tremendous enthusiasm for the collaboration and worked in mission mode. He stationed himself in Delhi and brought a committed work ethic marked by 730 am meetings and 100-hour work weeks. The AIIMS-TCS MOU was duly approved by the Governing Body of AIIMS. Girish Krishnamoorthy and I signed the MOU in the presence of Prof Misra in May 2015. This was a major step forward for AIIMS bringing in a major corporate giant with highly professional work ethic into our system driven by immense empathy for the wellbeing of the poorest of the poor patients.

30. The TCS brought in simple changes into the management practices of AIIMS. The approach was to facilitate faster registration, to dissipate crowds by creating larger patient waiting areas, introduction of thousand signages, introduction of screening at the entry point, introduction of patient care coordinators at the registration/ consultation areas and the rather unique exit OPD counters for all follow-up patients. To simplify the registration system, the Patient Registration Center was constructed. When the site for the Patient Registration Center was demarcated, the Chief of the RP Center for Ophthalmic Sciences felt that the front portion of the RP Center was going to be crowded out and opposed construction. He was convinced subsequently that the structure would be a temporary structure that would be dismantled once the new OPD Block is established.
31. The Patient Registration Center increased the number of registration counter from 10 to 50. Signages were introduced across AIIMS indicating the locations of various Departments, Laboratories and Blood Collection Centers. Since the waiting spaces were quite limited, additional patient waiting spaces were established by construction of an air-conditioned waiting halls. AIIMS had an existing waiting hall, where squatters were present, which was forcibly evacuated. The patient waiting hall for pediatric patients contained a lot of Walt Disney posters to make the experience a memorable one. An innovative feature that was introduced by the Computer Facility, AIIMS was the exit the EXIT OPD Counter where patients could seek their next appointments, and dates for the various tests that were necessary. TCS streamlined the process by extending the exit counters.
32. The Department of Hospital Administration was a key player in the AIIMS OPD Transformation Project. A young Assistant Professor Dr. Angel Rajan Singh along with his team of Senior Residents Dr Sheetal Singh was drafted to coordinate with the TCS for AIIMSOPD Transformation Project. The pilot phase was to cover the Departments of Pediatrics and Department of

Medicine. The AIIMS – TCS collaboration for the OPD Transformation project was completed by December 2015. The first day we tried to implement the new system, patients were advised to be accompanied by one attendant and patients were advised to move from Registration Centre to Waiting Halls - there was complete chaos. Some of us were physically manhandled. Security personnel were in short supply to enforce the envisaged systems. The crowds outnumbered us 3:1. Standing amidst the screaming crowds, I decided we relax the condition of patients in waiting halls till additional security personnel was inducted into the system. Clinicians in the consultation rooms found themselves waiting for patients to reach the consultation rooms as they were still in the waiting halls or in the screening counter. The evening meeting to review the day's events witnessed huge resistance to change. Prof Misra laid great emphasis on gradualism to bring about change if we were to take the initiative forward.

### **THE FIRST DIGITAL REVOLUTION IN HEALTH CARE**

33. On December 25, 2015 the Health Minister J.P.Nadda and MOS (IC) Power Piyush Goyal inaugurated the state of the art Patient Registration Centre and the waiting halls launching the AIIMS Transformation Project on India's Good Governance Day. It was a dazzling function. Dr. A.K.Deorari and Dr. Rita Sood spoke about the significant quality improvement that they had witnessed in the Departments of Pediatrics and Medicine. Several Patients also presented favorable responses.

MOS (IC) Power Piyush Goyal said

“On Good Governance Day - minimum governance and ease of business is for the benefit of the common man of India, it is for the poorest of the poor. Be it the Doctor, the security personnel, the Nursing personnel, each one has a role. The transformation that has commenced in AIIMS, is part of a long journey, and we rededicate ourselves to system improvements. Soon prescriptions would be done through an I-Pad, and medical records would be fully digitized.”

Health Minister J.P.Nadda said

“The scale of involvement of the stakeholders in the Transformation process was immense. It is a huge success story. I wanted to understand the benefits to the end person in the entire process. N.Chandrasekaran and Girish Krishnamoorthy were always there to

explain the details to me. I made 4 visits to AIIMS to convince myself of the benefits of the change. Acceptability by AIIMS of the changes proposed by TCS was an immense challenge and involving everybody was a huge task. I would personally congratulate Prof M.C.Misra, Mr. Srinivas, Mr. Agarwal, Mr. Krishnamoorthy and Mr. Shenoy for this success story. We would be replicating this success story in a number of hospitals.”

35. As part of the Transformation project, OPD patients and attendants were ushered into the state of the art, Patient Registration Center, with 50 Registration Counters each one equipped with a computer terminal equipped with e-Hospital software. New cadres of officials were operationalized in AIIMS. There were nursing informatics specialists, patient care coordinators and data entry operators. Kiosks had been set up at many places and the dashboards depicted the patient journey. They did not have to waste time in long early morning lines waiting to see the clinicians. The patient care coordinators guided them to the pediatrics OPD within no time. The nursing informatics specialists gave them a plastic UHID card for future references. Their patient journey had a stop at a waiting hall which had Walt Disney pictures.
36. Nursing Informatics Specialists were deployed to oversee the work of Data Entry Operators. The registration time was a mere 40 seconds for all new appointments with UHID numbers generated from the online registration system. Fast track queues had been created where the patients who had already registered themselves under the online registration system could get their OPD cards and move quickly to the Patient Waiting Areas. The entire approach was one of empathy and efficiency. Successful operationalization of the Patient Registration Center meant that the waiting time had come down by nearly 6 hours per patient. The 3 am serpentine lines were no longer there. They had disappeared and replaced by a more orderly queue system that commenced at 8 am and reached the OPD consultation rooms by 9 am.
37. Patients were passed through a screening system which was introduced in the consultation areas. The Clinicians would commence work at 9 am. Patients would reach the clinician’s rooms in an orderly manner. The most innovative feature of the AIIMS transformation model was the introduction of EXIT OPD Counter. Their next appointments at AIIMS along with all tests were scheduled in an orderly manner at the EXIT OPD counters. Patients who were recommended for advanced Laboratory Tests, Radio-Diagnosis, Virology and Pathology Tests as also follow-up appointments, all of which could be

scheduled from the EXIT OPD Counters. Patients thus had a systematized experience from the point of entry to the point of exit.

### **AIIMS – INDIA'S FIRST FULLY DIGITAL PUBLIC HOSPITAL**

38. Health Secretary B.P.Sharma laid down the roadmap for implementation of the AIIMS e-Hospital project soon after the launch of the AIIMS OPD Transformation project. He wanted all the modules to be completed in a period of one year, i.e. by December 2016. From January to July 2016, Secretary DeITY Aruna Sharma met AIIMS teams a number of times. AIIMS coordinated with DeITY on a weekly basis. Additional Secretary DeITY Dr. Ajay Kumar would visit AIIMS regularly for stakeholder meetings in Dr. Ramalingaswamy Board room. The modules that were considered for early implementation were the RIS –PACS (Radiology Information System and Picture Archiving and Communications Systems), the Laundry Module, the Dietary Module, the Blood Bank, establishment of Kiosks with Net Banking Facilities and Billing Modules. The inter-linking of Laboratories along with in-Patient data was also taken up.
39. AIIMS procured the RIS–PACS for Department of Radiology at a cost Rs. 5.2 crores. The NIC Tripura team was in available on video conferencing for each of these meetings. The stakeholders attending the meetings involved Dieticians, Hospital Administrators, Radiology Faculty, Blood Bank Faculty, Financial Advisors and software programmers. By June 2016, each of the modules envisaged for computerization under the e-Hospital project was completed.
40. The billing module was pursued with a lot of vigor. Former Health Secretary P.K.Hota admitted to AIIMS found it extremely tedious to get discharged on a Sunday when only cash counter is operational. He recommended that priority should not only be given to OPD registration but also to discharge of in-patients. We took P.K.Hota's advise and ensured that the Billing module was successfully completed as part of the e-Hospital Project. The entire task that the Health Secretary B.P.Sharma had laid out for AIIMS was completed nearly 6 months ahead of schedule. It was possible due to the unstinting support received from Secretary DeITY Aruna Sharma and Additional Secretary Dr. Ajay Kumar in addition to Senior NIC Officials, Rajesh Gera, Arun Rampal and Sudhir.
41. The Cabinet Secretary was the chief guest at the symposium to mark the occasion of AIIMS reaching the milestone of India's First Fully Digital Public Hospital. It was a landmark event.

**EXPANSION OF THE AIIMS OPD TRANSFORMATION PROJECT**

42. The AIIMS–TCS collaboration was progressing at a rapid rate. After the December 25, 2015 launch of the AIIMS Transformation Project, efforts were initiated to cover all the 5 floors of the RAK OPD and all Departments. The efforts were led by the Department of Hospital Administration. Dr. D.K.Sharma and Dr. Angel Rajan Singh would convene meetings for every floor. The process changes that were envisaged in December 2014 became a reality.
43. In a period of 6 months following the launch of the AIIMS OPD Transformation Project, the project had spread to each of the 5 floors of the RAK OPD AIIMS. The ENT department witnessed remarkable change. The Department had shifted to the newly renovated OPD Space and had done away with the secondary registration. The linking of all laboratories and blood banks also meant that multiple blood collection points could be eliminated.
44. After nearly 2-years of relentless efforts we had created a sustainable, replicable and functional model which represented a remarkable success story in India's apex tertiary care Institution.

**THE PRIME MINISTER'S INDEPENDENCE DAY ADDRESS – AUGUST 15, 2016**

45. The Prime Minister in his Independence Day address from the ramparts of Red Fort on 15/8/2016 commended the Digital AIIMS project and recommended it for pan India replication. Many State Governments and Central Government Hospitals sought to replicate the Digital AIIMS project. Ministry of Health and Family Welfare set up an Oversight Committee under the chairmanship of Health Minister and a Health Care Transformation Cell in AIIMS under the chairmanship of Director AIIMS to oversee the Prime Minister's vision of pan India replication. AIIMS has pioneered India's journey for patient friendly hospitals. AIIMS received a number of awards and high recognition for the Digital AIIMS Project. The Ministry of DeITY felicitated AIIMS for successful implementation of the Digital AIIMS which had the highest footfalls of Digital India projects. The Department of Administrative Reforms listed Digital AIIMS as amongst the best innovations for the period 2015-17 and included it in the select list of projects in their publication "Innovations" released on National Civil Services Day, April 21, 2017.

**Table 1: Impact of Digital AIIMS project**

S No	Month and Year	No of Patients Attending AIIMS OPD
1	July 2015	212125 – <b>AIIMS Online Registration System launched by Prime Minister as part of</b>
2	August 2015	209793
3	September 2015	181561
4	October 2015	180025
5	November 2015	152850
6	December 2015	164680 – <b>AIIMS OPD Transformation introduce</b>
7	January 2016	227804
8	February 2016	256347
9	March 2016	278639
10	April 2016	270695
11	May 2016	302233
12	June 2016	220012
13	July 2016	207897 – <b>AIIMS becomes India's 1<sup>st</sup> Fully Digi Public</b>
14	August 2016	319347
15	September 2016	317887
16	October 2016	258639
17	November 2016	285841
18	December 2016	312935
19	January 2017	301134
20	February 2017	304505
21	March 2017	304358

Source: <http://ors.gov.in/copp/ehospitalDate.jsp>

The Digital AIIMS project has ensured that AIIMS clinicians can attend to nearly double the number of patients with same consultation spaces following process streamlining. The Patient journey is hassle free and the clinician's time is freed to consult more patients.



**V.Srinivas, IAS**

*Academic Qualifications:* M.Tech Chemical Engineering

*Postings in Government of India:*

- 2010-17: Deputy Director (Administration) AIIMS, New Delhi  
Joint Secretary to Government of India, Ministry of Textiles  
Joint Secretary to Government of India, Ministry of Culture  
Director General National Archives of India
- 2003-2006: Advisor to Executive Director IMF, Washington DC, USA
- 2001-2003: Private Secretary to Finance Minister of India  
Private Secretary to External Affairs Minister of India
- 2000-01: Deputy Secretary to Government of India, Ministry of Petroleum

*Postings in Government of Rajasthan:*

- 2017 – till date: Chairman Rajasthan Tax Board and additional charge of Chairman Board of Revenue for Rajasthan
- 2007-10: Secretary to Government, Planning and Finance (Budget)  
Secretary to Government, Family Welfare & MD NRHM  
Secretary to Government, Science & Technology
- 1989-2000 Deputy Secretary Finance/ District Collector at Jodhpur/ District Collector Pali/ Director Watershed Development & Soil Conservation department/ Additional Area Development Commissioner IGNP/ Sub Divisional Officer

*Awards/ Fellowships:*

(1) Indian Council of World Affairs Fellowship for book research proposal “India and IMF” 1991-2016 (2) AIIMS Leadership Excellence Awards for 2017 and 2015 for outstanding administrative leadership (3) A number of certificates of appreciation/ commendations for outstanding public service in AIIMS, Agriculture, Culture, Textiles and Planning from Health Minister of India, President of India, Chief Minister of Rajasthan, Secretaries of Health, Culture and Textiles respectively (4) National Junior Badminton Champion 1984 and All India Universities Badminton Champion 1988

*Publications in 2017*

(1) India and IMF 1991-2017, (2) India’s IMF Programs 1966 and 1981, (3) Archiving the History of the Reserve Bank of India, (4) Achieving Durable Inflation (5) Digital AIIMS (6) Rajkumari Amrit Kaur (7) Journeys of AIIMSONIANS (8) AIIMS Act 1956 (9) Dr. V.Ramalingaswami (10) AIIMS – A Brief History (11) Governance (12) Institution Builders, (13) Affordable Health Care, (14) Health Care For All – The NHP 2017 (14) The First Digital Revolution in Health Care (15) The Journey of Bank Sector in India (16) India’s Economic History

*Book Reviews in 2017:*

(1) From Great Depression to Great Recession by Atish R. Ghosh and Mahvash S.Qureshi (2) Who Moved by Interest Rate by Duvvuri Subbarao (3) Dialogue of the Deaf by TCA Srinivasa Raghavan (4) An Economist in a Real World by Kaushik Basu