Patients' Trust in Public Health System Mediated by Hospital Information Systems in Context of LMIC

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Abstract. Public health information systems in LMICs have an been studied in the context of primary health care while systems in district hospitals have not attracted the required attention. This is a sad neglect, given that district hospitals in LMICs cater to a high proportion of the population in a district and also provide life-saving healthcare services. ICTs have played a significant role in improving social trust in LMICs and we explore this in context of public health in India. While getting hospital information systems to work in district settings is a non-trivial and expensive challenge, it becomes imperative to understand what benefits citizens experience with the introduction of such systems. Drawing from an empirical base of a successful 10-year implementation of a hospital information system across a network of 20+ district hospitals in the state of Himachal Pradesh, India, the authors use the conceptual perspective of institutional and interpersonal trusts to analyze the perceived benefits seen for patients, and how this has helped shape patient trust towards the technological intervention and the hospital from where they avail services.

Keywords: Public health, Hospital Information System, Patient trust, India.

1 Introduction

Trust represents "an instantiated informal norm that promotes co-operation between two or more individuals" [1]. Studies have also argued that trust in society is related to economic and human development [2, 3]. Özcan and Blørnskov [4] conducted an empirical analysis of the relationship between trust and human development across 86 countries and found that while there are high levels of trust in Scandinavian countries, there are significantly lower levels in Rwanda, Brasil and Trinidad and Tobago. We find this analysis intriguing to further explore, particularly in the context of ICT4D research, to understand the role that ICTs may play in enhancing or undermining trust. We explore this in the context of public health in India.

Having experienced health care systems in both Scandinavia and in India, we can reflect on a lay understanding of the role of trust. In Scandinavia, when one takes an appointment with a doctor, you are sure to meet the doctor, get 15 minutes of a good hearing, and receive the medicines prescribed. In India, these certainties are not a given, particularly for those living in rural areas, who may make a long trek to the public health facility to find that the doctor or the prescribed medicines not available. From the perspective of citizens, in Scandinavia, the health system can be trusted, which encourages citizens to avail the facilities and care, while the same is not the case in India. Improved access to health services, undoubtedly strengthens development processes, which explains Scandinavia's high levels of trust scores [4].

An interesting question from the perspective of ICT4D research is how does ICTs influence the growth or not of trust in a public health context in a LMIC? For example, it could be possible that ICTs may help citizens to pre-book their appointments to ensure they can meet their doctor on the scheduled time. ICT enabled electronic medical record (EMR) systems can potentially provide longitudinal records of a patient, which can help strengthen individual clinical care. Arguably then, understanding how ICTs shape trust processes becomes crucial in how they can both improve health care and broader development processes. The research question this paper addresses is: "How do patients perceive their healthcare experience with public hospitals with the introduction of technology, and what implications does that have on their trust in the public health system?"

The empirical basis to analyze this question is a state level hospital information system in an Indian state. After this brief introduction, in the next section, we provide a brief overview of the public health context in India relevant to our analysis. We then present our conceptual perspective around trust and ICTs. This is followed by a discussion on the methods and then the case study narrative. The case analysis and discussion sections then follow.

1.1 The Context of Public Health in India

The Indian economy in the past decade has shown immense growth, that has also resulted in further widening of disparity among rich and poor. Growing socio-economic disparity has also led to worsening of health outcomes [5] as incomes, do not by themselves, ensure the health and well-being of people [6]. The right to live is conferred by constitution of India upon its citizens, consequently the government is required to guarantee right to health for all [1]. India's budgetary allocation (approximately 1.28 % of GDP in 2017-18) for health has always been inadequate given its population size and the health challenges it faces. While the Indian government has been reasonably successful in building the digital infrastructure at district levels, the availability of adequate healthcare professionals remains a big challenge [7], with more than 50% specialist positions not filled in district hospitals [8].

Applications of ICTs are a central part of health reform in most LMICs. However, in India, as in many other LMICs, the focus has been on strengthening primary health care systems. Efforts to strengthen the hospital sector with ICTs has remained limited, and so also is research in this domain. This is a significant lack, given that a large proportion of health care to citizens is provided through the hospital sector. Braa and Sahay [9] point out that the hospital sector has tended to be neglected by the donor community because hospitals represent complex organization where it is far more difficult to show results than in the primary care sector.

2 Trust – Basis for the Conceptual Framework

Trust can cause patients to be more receptive to pre-treatment counseling, encourage relevant medical disclosures, enable exchange of medical information and patient participation in decision making around their health issues [10]. Patient satisfaction with greater trust in the health system will potentially better clinical outcomes [11]. Prior studies, primarily in rich countries, have analyzed trust with a key focus on data sharing issues [12]. In LMICs, the priority is to ensure cost-effective healthcare to large populations. Since trust

can be an important resource in improving outcomes of scarce resources. ICT reform efforts should seek to enhance trust.

Trust exists in a situation of vulnerability of a trustor who is confident that the trustee will take care of his/her interests with due importance [13, 14, 15]. This suggests the inseparability of trust with vulnerability, and that trust is not needed in a situation where trustor is not vulnerable. Vulnerability is inevitable and unavoidable in medical settings given the power and knowledge asymmetries between the doctor and the patient. Trust tends to be voluntary and cannot be coerced into any relationship [16], representing a "judgment in a situation of risk that the trustee will act in the best interests of the trustor, or at least in ways that will not be harmful to the trustor" [17]. In practice, trust plays a massive role in the choice a patient makes towards selecting a doctor or visiting a facility for conducting diagnostic or imaging tests. In India, doctors have the status of gods leading to blind trust of patients in them, and the doctor's recommendations is taken as the "truth" [18].

Research has emphasized both institutional [19] and interpersonal forms of trust [20]. Institutional trust represents a form of public trust indicating the structural aspects of the healthcare system [21]. Giddens [22] has argued that interpersonal trust is built upon institutional trust, which takes place at interaction sites or 'access points', involving 'facework' or 'faceless' commitments depending on whether a physical representative is involved [22]. Facework commitment is reflected by personality related facets, such as professionalism, communication, general mannerisms and caring attitude, exhibited by a system representative [23]. On the other hand, faceless commitment is created by legitimacy and technical expertise, leading to higher quality services [22, 24].

In a medical setting, both interpersonal and institutional trust are relevant in conjunction [25]. Assessment of institutional or public trust is necessary as it has implications on interpersonal trust between patient and the health system [21, 26]. We next discuss how ICTs may mediate these trust related processes.

2.1 Trust and ICTs

Trust has been studied in the context of Electronic Health Records (EHRs) [27, 28], primarily in rich countries. Institutional trust and technical reliability are intimately intertwined [29], and studies have focused on their implications on improving technological outcomes [30]. While trust may be enhanced if the ICT helps the patient to spend reduced time in the hospital, the opposite may happen if there are frequent system breakdowns resulting in the patient having a worse experience in the hospital than before.

Trust is a process which builds gradually based on several interactions between the trustee and trustor [14]. Offe [31] argues that institutions must commit to values of truth and justice to build a strong foundation of trust of patients, even if the patient has weaker ability to pay for medical expenditures [32]. Across LMICs, trust in medical relationships has been institutionalized in different ways vis-à-vis "ethical commitments" in Tanzania, "quality of training, and "sufficiency of equipment and medicines" in Sri Lanka, and "accountability for complaints mechanism" in South Africa [33]. Trust has typically been treated as a variable or a construct [34], while others have viewed it as a process comprising of trust creation, development and maintenance [26]. Lee and Choi [35] have focused on discourses around trust, including its initiation and evolution.

2.2 Our Analytical Framework

We propose an analytical framework which combines both institutional and interpersonal forms of trust from a process perspective. Luhmann [19] argues that trust helps individuals to deal with complexity, even though their actions may not appear completely rational. Patients may simplify their choices of the institution in the presence of trust in the care provider. Patient's interpersonal trust may outweigh issues of institutional conditions. A patient is situated in a web of interactions with the hospital staff including doctors, lab technicians, pharmacists, and registration clerks, which span both institutional and interpersonal forms of trust relationships.

Crucial to the shaping of trust, is the patients' knowledge and the flows of information he/she is engaged with. For example, the registration number is crucial for the patient to understand how he/she is remembered by the institution, how safe the data is, and the benefits the ID provides, for example, health insurance. So, how the registration clerk may register or retrieve the ID number shapes both the institutional and interpersonal levels of trust [36]. ICTs bring forth new forms of collecting and representing information, which potentially influences trust relationships over time based on repeated interactions [24]. Our analytical framework seeks to understand how a patient's interaction at the hospital at both the institutional and interpersonal levels is mediated by ICTs, and the implications it has on trust.

3 Research Methodology

3.1 Research Design

The current paper is part of a larger action research initiative to design, build and implement a hospital information system (HospIS) in a network of 20+ district hospitals in a northern state in India. While this project has been ongoing for over a decade, we report in this paper on research conducted over May-November 2019, when we made personal visits to a set of five hospitals and interviewed 66 patients to understand their experience in the hospital post the implementation of HospIS.

3.2 Data Collection

Trust in HospIS and public health system was gauged using analysis of qualitative data collected through checklists, in-depth interviews and observational methods on patients and attendants in the hospitals. Guided by theory, checklists were formulated reflecting proxies to understand trust, and finalized in discussion with other members of the research team. These probes in the checklists were in the form of pointed questions such as - whether they felt the system provided them with improved care and what features of HospIS they found relevant [37]. Secondary data from various reports was extracted to develop a deep understanding of current state of affairs at the district hospitals of India.

We contacted Out-Patient Department (OPD) patients at various locations in the hospital, e.g. near registration desk, waiting areas, outside doctor's chambers, imaging labs and pharmacy. In-Patient Department (IPD) patients were not contacted considering issues of hygiene and severity of their medical

condition. However, their attendants were generally consulted on relevant issues.

4 Data Analysis

The qualitative data collected was interpreted to identity themes of institutional and interpersonal trust and their interplay. We discuss the interpretations of case narratives about patient trust in the following section which is organized around four key themes illustrating institutional and interpersonal trust, and their interplay.
In the Table 1 below, we show some illustrations of the themes.

Table 1. Themes of trust.

Sl.no	Themes	Interplay of Interpersonal and Institutional Factors
1	Improving patient experience in hospitals	New system of computer generated tickets in hospitals, which gives clear directions on whom to visit; reduced chaos and orderly queues, with separate queue for senior citizens, and no jostling for personal favors; reduced waiting time; a more positive consultation experience with doctors
2	Improved documentation for patients	New forms of communication, such as sending of lab reports by text SMS; improved possibilities for the retrieval of lost medical records; printed prescriptions and lab test reports, with medical ranges; empowering patients with OPD slips/prescriptions etc, which can provide patients with other opportunities for accessing care
3	Sense of fair treatment	Equal opportunities of treatment to the disadvantaged; Clerks ensure queues are not jumped by privileged class; fee of cost treatment for all
4	Potential linkage of other Public health schemes	Smart card linked health insurance (e.g. PM-JAY); Transparency in distribution of public goods, e.g. drugs

4.1 Improved Patient Experience.

Older patients categorically mentioned some changes in the information flows they saw initiated through HospIS. Patients, particularly those with prior experience with the hospital, could see some positive changes, enhancing their sense of trust, and further recommending the provider to others. On the other hand, if patients had an untoward experience, possibly due to system malfunctioning or power failures, causing unnecessary long waits and increased frustration, it created distrust for system and institution.
Patients who had frequent interactions with the system tended to have more positive feelings of trust, which motivated them to make repeat visits to the hospitals and also recommend same to the others. This represents a cyclical process of system experience, institutional and interpersonal trust, and enhanced referrals leading to growing feelings of trust [18]. Some examples of improved patient experiences are given below.

Reduced chaos and improved management of queues. Patients appreciated greater organization of queues at the OPD due to a unique token ID being

issued to them at the registration. Several participants cited reduced physical chaos in the hospital including, less running around, reduced bypassing of the queues, reduced harassment to small children, physically disabled and women. A separate queue provided for senior citizens, were recently introduced reforms which were attributed to the ICT intervention. Everyone who comes to the hospital now knows that they must wait for their turn as represented in their registration slip. "*Earlier the stronger men would push the weaker lot, and get to the queue and doctors first but that cannot happen now*", as testified by a female patient. Another old patient mentioned "*registration at the hospital is an age-old practice, earlier it used to be done manually which used to be a long and clumsy routine. After computerization, registration is much more organized and faster*". "*Technology played a hugely important role in streamlining the process of health care delivery*", quoted another patient. The trust in the healthcare provider breaks if the patients' time is not valued and there is mismanagement in attending to patients by hospital staff. A poor experience with a system representative also affects institutional trust adversely, in the long run. The sense of greater order with the queuing system, an institutional intervention, also helped improve the interpersonal trust between the hospital staff and patients, who would earlier have been the target of patients' anger when the queues were poorly managed.

Improved efficacy of hospital staff. It is the care and motivation to care for the trustor's welfare, emphasizing affective opinions, on which trust is, based [38]. Patients generally reported experiencing cordial behavior of the hospital staff. Only negligible number of participants reported misbehavior by the lab staff or doctors. Mostly, all the patients reported that during consultation, despite heavy load, doctors listened to the patients calmly and conducted a thorough diagnosis of their problem. Reportedly, at least some part of the doctor-patient consultation process is now managed by the system rather effectively, resulting in reduced anarchy at every level. For example, once the patient was registered, his/her record would show up on the doctor's screen which reduced the effort required by the patient to tell his/her history to the doctor. The institutional system thus had positive implications at the interpersonal level. However, since the OPD module was not well utilized by all doctors, the full institutional potential the system provided could not be leveraged.

Patients outside OPDs now patiently wait for their turn as they know no one will bypass the ordered queue. Also, doctors at bigger facilities have support of data entry operators for processing patient information into the system so that prescriptions can be printed. A patient was quoted saying, "*When there is less noise and crowd outside OPD, the doctor is able to focus on consultation and attends to the patients well*".

Further probing about patients' institutional trust, more specifically, their perceptions of competency of the doctors, was done by asking whether the patients recovered from illness following doctor's advice; whether patients took second opinion from outside private facilities; if patients ever felt that doctors were in a hurry to wind up consultations since there was long queue? Surprisingly, to all the questions we got encouraging responses. Patients had enormous trust in the doctors of the surveyed hospitals, particularly in the department of gynecology, surgery and orthopedics. Reportedly, they surrendered themselves to the doctor completely for the treatment and followed their advice diligently, demonstrating both interpersonal and institutional trust. Improved quality of interaction with staff also enhanced interpersonal trust. A patient testified about the altruistic attitude of doctors saying, "*I know there*

was huge queue waiting outside for this doctor but he never avoided answering repeated questions about his medicine prescription. Had I been at his place I would have definitely given irritated response, really appreciate his service intent", reinforcing his trust in doctor as well as the health system, representing an interplay of institutional and interpersonal levels of trust.

This improved patient experience, was also seen as a blessing for the non-medical staff. One staff at a OPD said:

"*Earlier, patients used to jostle with each other to know about their turn and even after repeated requests (to them) for taking seat in the OPD waiting room, it would fall on deaf ears of anxious patients. However, with the computerized token system facilitated by HospIS, they sit patiently for their turn as they already know their order in the queue for a particular OPD*".

"*It is such a relief for us. Patients (in the past) used to accuse us of favoring some patients over others and sometimes also talked to us in harsh or abusive language. Now the token numbers of patients are called and there are no grudges*," said one of the attendants at the gynecology ward. Automated token system was crucial in building trust. The older generation was particularly content with the way hospital operates now, as one of them was quoted saying, "*Now there is a separate queue for oldies like us, and we are not pushed back by stronger and younger fellows for the registration slip*"

4.2 Improved Documentation for Patients

Retrieval of medical records from HospIS: There was an old man waiting at the surgery OPD, extremely worried about having forgotten his lab reports at home and had no one accompanying him to fetch the report from his home. Looking at his worrisome state, we approached and informed him that he need not worry if he had an old prescription with his CRR number (HospIS generated unique ID) which would allow retrieval of his record any time. He was much relieved to learn about this feature, which then helped him to have a thorough consultation with the surgeon for his upcoming surgery. Such positive experiences were crucial in building interpersonal trust which helped enhance institutional trust.

Printed prescriptions and lab test reports reduced the probability of medical errors such as wrong prescriptions and diagnosis, often caused by illegible handwriting of the doctor. This supported both interpersonal and institutional trust. In their experience, patients observed that hand-written prescriptions are often illegible, as a result either they remained tied up with the same doctor or end up taking wrong medicines because they had to rely on the ability of the pharmacist to correctly read the hand-written prescription. With the introduction of HospIS at the hospital, also came increased opportunities of choice for the patients. Now, with a printout, they could access the correct medicines either from the hospital or external pharmacies employing interpersonal trust. Furthermore, if the patient wants to opt for a second opinion elsewhere, they could do so with the printed OPD slip, which they previously did not receive. Exercising such a choice helps empower patients [37] and enhances institutional trust.

Text message indicating completed lab reports. HospIS also provided patients with an important feature of notifying by SMS when the lab reports are ready. Many patients reported having received a text message on their phone about their lab test report being ready for pick up while a few were apparently unaware of this functionality. Overall patients were found to have

benefitted from HospIS, through getting empowered over time citing several examples.

4.3 Sense of Fair Treatment

Prior to HospIS, a patient known to a member of the hospital staff often would take advantage of this to bypass the queues and directly approach the doctor. Such behavior of "jumping the queue" would infuriate the other waiting patients, and potentially negatively influence patients' sense of institutional trust as was not seen as being "fair". The vulnerable and disadvantaged patients were the most affected. HospIS made such behavior a thing of the past since the queues were now operated using registration numbers and consultations with doctors was based on patient's serial number in the queue.

This queuing system also had adverse effects on those who were used to being dispensed with favors in earlier times. We saw the case of a senior government official getting furious at the registration clerk for not allowing him to see the doctor directly and requiring him to register in the system at the registration this. While this was a "fairer" system than before, we were told by some patients that the trend of favoritism still continued in the smaller hospitals:

"*The hospital staff doesn't bother following the registration order with villagers like me. I always have to spend the whole day waiting for the treatment while staff members bring their relatives and they get the treatment immediately*".

Approximately one third of the patients surveyed at these facilities mentioned that hospital staff favors relatives or friends and gets them registered from a different "staff" queue. Other patients, who had not encountered similar situations, were positive about the computerized system. This difference of opinion could be attributed to the lack of administrative control and monitoring in district hospitals distant from the state capital. Strict controls on hospital staff are required to implement "absolutely no undue favors to any relative or friend" policy to achieve the purpose of equality for all [39], a key determinant of institutional trust.

While, many other patients also mentioned that they got free treatment at the hospital irrespective of whether they knew any staff member or not. Also, registration desk ensured that the allotted serial order is mostly followed. With HospIS managing the patient inflow, they are more confident about transparency and fairness from the hospital staff about medical treatment.

4.4 Potential building of linkages to other public health schemes.

Several patients acknowledged available public health schemes, such as free treatment to pregnant woman and children under the age of 5 years. Some respondents were already using smart cards issued under these schemes while others were curious to understand how they could enroll and avail benefits under these different schemes. A pregnant woman told us about the general lack of awareness citizens had about such schemes. She seemed particularly enthusiastic about the digitization at the hospital, as she believed that it could help building awareness and help them to enroll under these schemes. She also suggested that awareness about various zero-bill schemes linked with Aadhar card (universal identity) of the users should be created. Such information dissemination amongst citizens through pamphlets or radio would help enhance greater public trust in the health system. Such schemes, when

linked with system, could help ensure the removing of bottlenecks in fair distribution of benefits under them. Broadly, the more the public can take advantage under public health schemes; greater will be their institutional trust in the health system, with positive implications on the building of interpersonal trust with the hospital staff.

5 Discussions

Our case analysis helped us identify some key recommendations for three key stakeholder groups (technology providers, hospital administrators and citizens) on how to build trust at both institutional and interpersonal levels. These are now discussed and briefly presented in Table 2.

Table 2: Summarizing recommendations to stakeholders

Factors	Recommendations for stakeholders	Interplay of Interpersonal and Institutional Factors
Institutional	System design team	Electronic bill boards displaying array of information useful to patients, e.g. doctors on leave, tests not available, etc.
		Online registration from home
		Enabling transfer of medical files electronically through intra-hospital networking
	Hospital administration	Creating awareness about several system-linked public health schemes
		Separate queue for patients waiting for lab test
		Employing more manpower (both medical and non-medical)
		Surprise visits to hospital for ensuring HospIS being used by staff
	Citizens	Being more information demanding, e.g. Printed prescription in smaller facilities also, insisting doctor to check on computer screen past record of patient.
		Getting smart cards made
		Developing understanding of available public heath schemes
Institutional and Interpersonal factors intertwined	System design team	Pharmacy networked with OPDs so that only available medicines are prescribed by doctors
		More technology interventions to ensure HospIS implementation at all levels in hospital
	Hospital administration	More awareness on aspect of confidentiality of patient information
	Citizens	Patients should question about serial order of those who are bypassing queues
		Patients should carry old prescription or CRR number so that they are not registered as a new patient
		IPD patients may ask for printed discharge summary

5.1 System Design Team

We provide some recommendations for the system design team which we believe could strengthen both interpersonal and institutional level trust.

Strengthening easy and cross-functional access to information. A female patient, who had specially taken leave from her workplace to come down to the hospital for consultation with orthopedics, was particularly annoyed because she had to wait a long time in the registration queue for her turn, only to realize that the orthopedics doctor was on leave that day. If she could get this information soon after reaching the hospital, she would have gone back to work to come again some other day. So, she made a useful suggestion after this experience - information which could save patients' time, e.g. doctors on leave, tests and medicines not available and number of beds occupied/available at the emergency section, may be displayed on electronic billboards as extracted from the system. Such simple technology additions can bring in more order and discipline at the hospital, value the time of patients, prevent unnecessary crowd and reduce unnecessary footfall at the registration desk as well as at the OPDs.

Similarly, if the pharmacy is linked with the OPDs through the system, doctors can then prescribe only those medicines that are shown to be available by the system. Such cross-functional and easy access to information will help patients form positive perceptions about the HospIS and thus, develop greater trust in the health system at large. Though this functionally was technically available in the system, it was not being well utilized because of the poor use of the OPD module by the doctors.

Online registration from home. A senior government officer who was not too amused to go through registration had suggested for a provision of online registration from home. He suggested that this will not only reduce the burden on registration desk but also be more convenient for patients, thereby saving patients' time, supporting their institutional trusts in the system. Again, we believe building this functionality is not only a technical task but requires an institutional commitment to make such a system work.

Enabling intra-hospital networking. The interactions with patients revealed that in case of transfer to another hospital, their medical details were either handed over to the patient or sent out physically to the referred hospital directly. It will add to the convenience of patients if the medical details are transmitted through HospIS from one hospital to another. This will likely require some process reengineering on the part of administration to create intra-hospital networks within the public health system. Also, systems of data regulation would need to be strengthened to ensure patient privacy is maintained and due consent is taken on use of personal information.

5.2 Hospital Administration

Below, we list some expectations from the hospital administration that came out in our interactions with patients, likely to enhance their institutional trusts in the system.

Technology interventions for greater perceived fairness. HospIS played a major role in reducing favoritism and bringing in equality of treatment. From the interactions, we inferred that patients look for further technology and administrative interventions such as surprise visits, or CCTV cameras to ensure enhanced fair treatment for all. This will also help patients build institutional trust based on enhanced interpersonal trust delivered

through higher levels of staff monitoring [22]. However, we must be sensitive to the fact that enhanced staff monitoring may lead to their resistance and counter-implications.

Programs for increased awareness about system and government interventions. Many of the patients interacted with were either clueless about how to avail benefits under different government schemes or found the procedure for claiming benefits cumbersome. Greater awareness can help minimize procedural complications and will allow amateur and less literate patients to avail benefits under these schemes with greater confidence, further strengthening institutional trust for them.

On a similar note, most of the patients do not understand the implications of unsecure private medical information. When patients know that no one else will see their medical information except for those authorized, they will also have less hesitation answering taboo questions from the doctor e.g. about HIV infection or family planning, rendering system with better quality data and more confident patients.

Improved processes for patient inflow management. A patient who only came for getting her ultrasound scan done was miffed to have waited in a long registration queue and suggested for a separate queue for people who have already been diagnosed and prescribed pathology or imaging scan by the doctor. This will both reduce the queue size and value patients' time. Further, several patients perceived that, at every stage, from data entry operators to doctors, increasing the manpower will help improve the efficacy of healthcare delivery. This will also help in collecting large scale and quality data which can then be used to analyse trends and patterns longitudinally for improving health outcomes in the state, thus, enhancing citizen's trust in HospIS.

The implementation of these suggestions will further serve the overarching purpose of providing adequate and superior care to the patients making them content with the treatment and facilities, thus, enhancing their trust in government, public facilities and public healthcare, in specific. The institutional trusts in public health system will positively affect their perceptions about the hospital staff, further improving interpersonal trusts.

5.3 Citizens

The above discussion reflects that the nature of health consumers or patients surveyed under the current study is information demanding. They are more empowered and inquisitive about their interaction with the healthcare provider and treatment being received.

The patients should make demands to doctors for checking their past medical history in the system from their unique CRR number during consultations. They should even demand from doctors to give printed prescriptions at all the hospitals as is done in bigger facilities of the capital. Patients, at the time of discharge from hospital, can ask their doctor to provide a printed summary of the treatment done and tests performed along with their results to facilitate consultations later. Given the fact that the technology intervention has been developed with tax money, patients should be made aware of their rights to demand different types of system generated information.

6 Conclusions

This research provided an understanding of the process of building patient trust in the public health system, especially as mediated by the hospital information system. With several examples cited by surveyed patients, about their care experience at the hospital, the complex role of trust is further validated, especially concerning the issues of justice and equity. A clear distinction between the application of interpersonal and institutional trusts was a challenging task since the process of trust development in any health system involves intertwined patterns of relationships between both forms of trusts. This overlap of trust in certain instances is consistent with prior work [38]. While prior research has focused on ICTs, this research studied this issue in the hospital sector. Studying the implications of ICTs from the perspective of patients is another important contribution.

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