

CLINICAL SERVICE USER PERCEPTION OF EMR SYSTEM AT NARAYANA HEALTH

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Introduction

Narayana Health along with ICT Health LLC has begun implementing electronic medical record framework for dealing with the consultation and treatment of OPD patients.

Rationale

Narayana Health is rolling out EMR to more high patient volume centres without assessing its viability in settings where it is at present executed, how useful users find EMR and whether the preparation users get before they begin using the EMR is sufficient or not.

Research Question

What is the perception of users using Electronic Medical Records system in Narayana Health?

Objectives

- To evaluate user's observation on the viability and productivity of EMR in contrast with paper based records.
- To investigate user's satisfaction on the advantages and challenges on utilizing the electronic medical records.
- To recognize and assess training gaps and training requirements for users before they begin using EMR.

Methodology

- **Type of study:** This was a cross sectional evaluation research study.
- **Study place:** At present there are eight centres utilizing EMR framework as a part of OPD consultations. Out of the eight, EMR was implemented in five centres amid the dissertation period. Out of the five centres two were selected NH Multispecialty Hospital, Barasat and NH Superspecialty Hospital, Howrah; for the study.

- **Population :** There are 147 consultants at NH Howrah and 81 consultants at NH Barasat which gives a total population of ($N=228$). For 90 % C.I and 10 % margin of error the recommended sample size is 53. 54 respondents out of 228 randomly selected. Of the 54 respondents 38 responded that they were using the system since it was implemented.

- **Sampling :** This study used stratified random sampling to get study participants.
- **Data Collection :** Data was collected through anonymous self administered questionnaire. The questionnaire was distributed to the doctors a month after EMR was implemented at these sites. All the respondents had used the EMR system for at least a week before the survey.

- **Data Analysis :** Data was analyzed utilizing the Microsoft Excel. Information was entered physically into the product application from the questionnaire and investigated. Diagrams and graphs were also made utilizing Microsoft Excel.
- **Ethical consideration:** Verbal consent was taken for the study. Written consent was not taken as the information collected was not mentally or psychologically "intrusive" and did not include members' private, individual, personal biographies, and encounters.

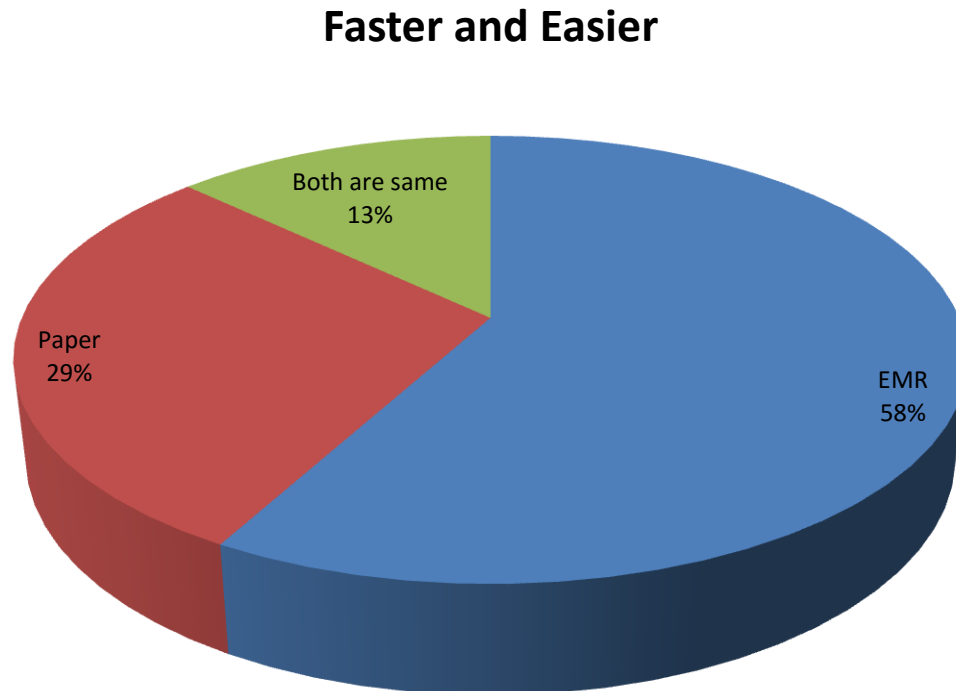
Study Limitations :

- Being a very new technology the adoption of the system is low, hence the limited sample size and made it difficult to sample the study participants
- The second limitation is that the centers being high volume centers it was difficult to interact much with the consultants during their consultation time.
- The third limitation was two centres in the east were selected for the study; consultants might have a different experience and view of the system in other parts of the country.
- The fourth limitation was time, as the study was supposed to be completed within a given time frame; as such the study was done only after a month post go live. The findings could have been different as doctors get used to the system overtime.

Results

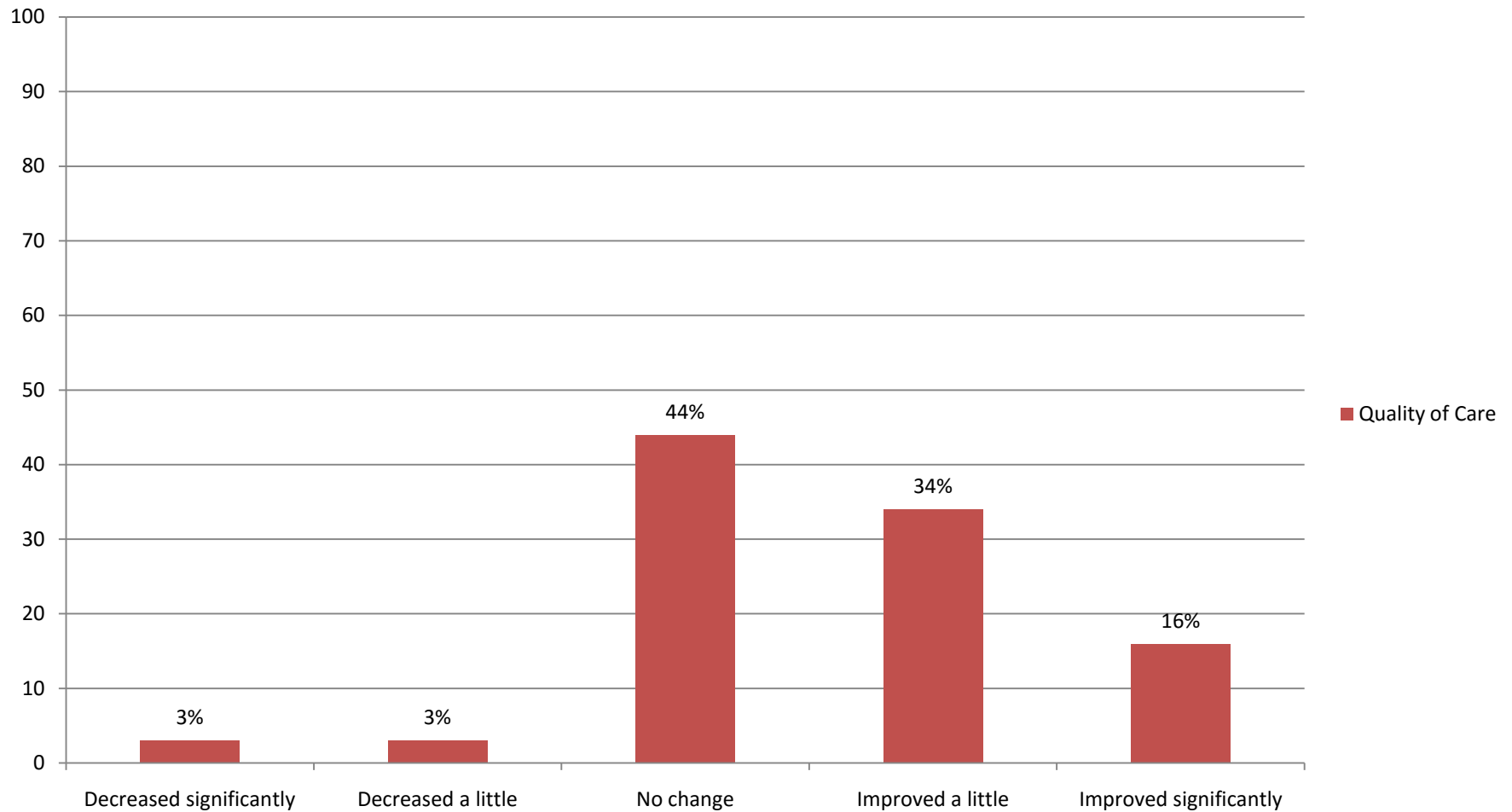
A .Viability and Productivity of EMR

i. EMR perceived as faster and easier to complete



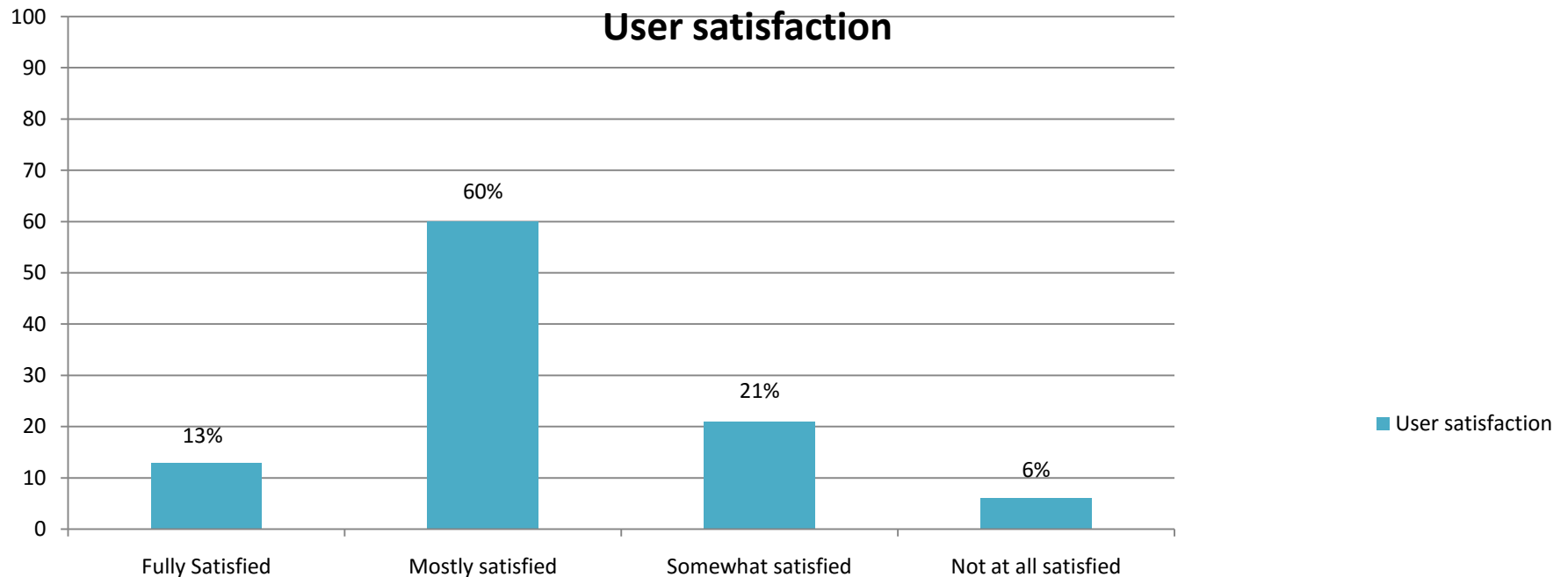
ii. Quality of care

Quality of Care

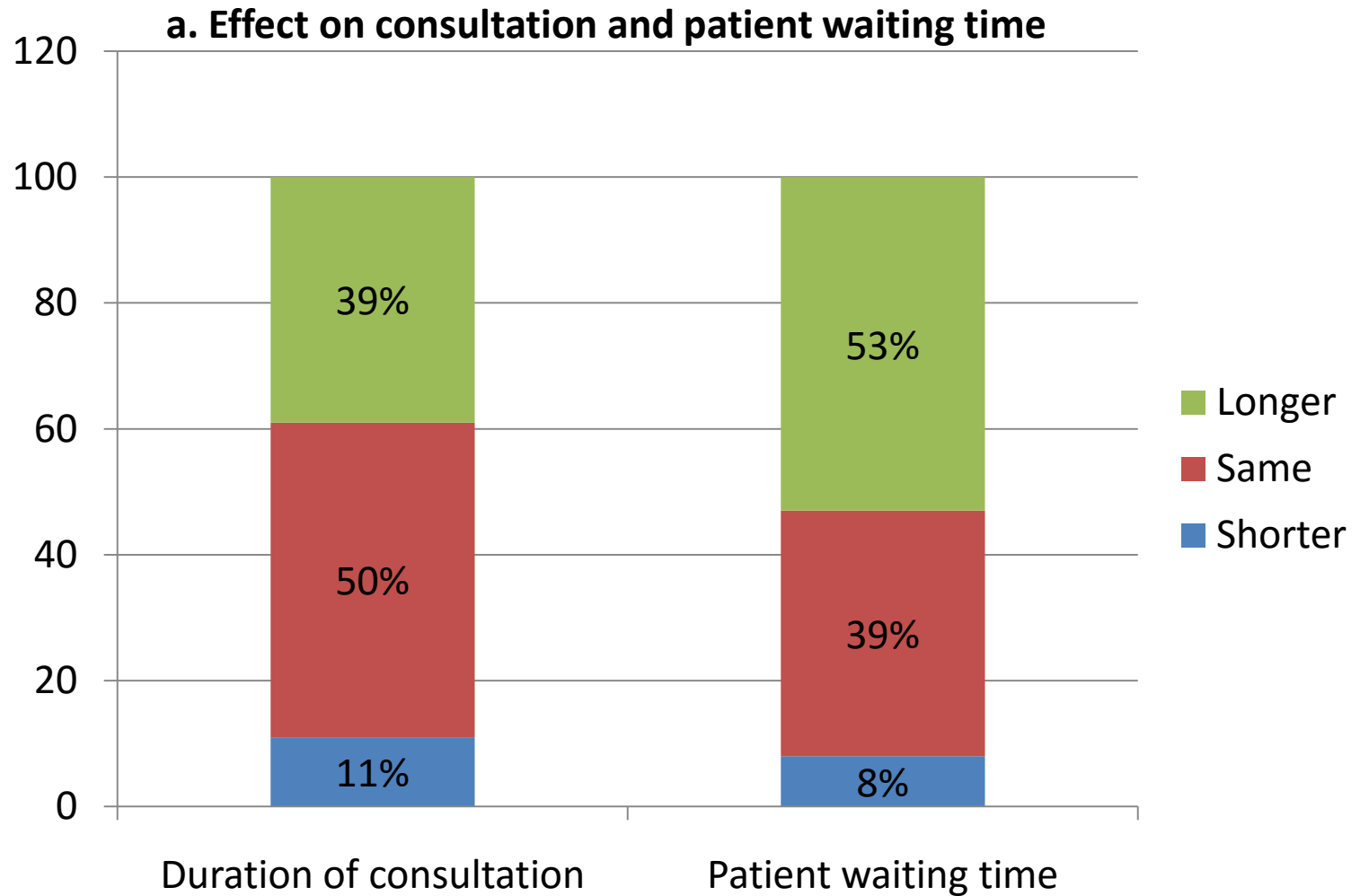


B. User satisfaction and challenges of using EMR

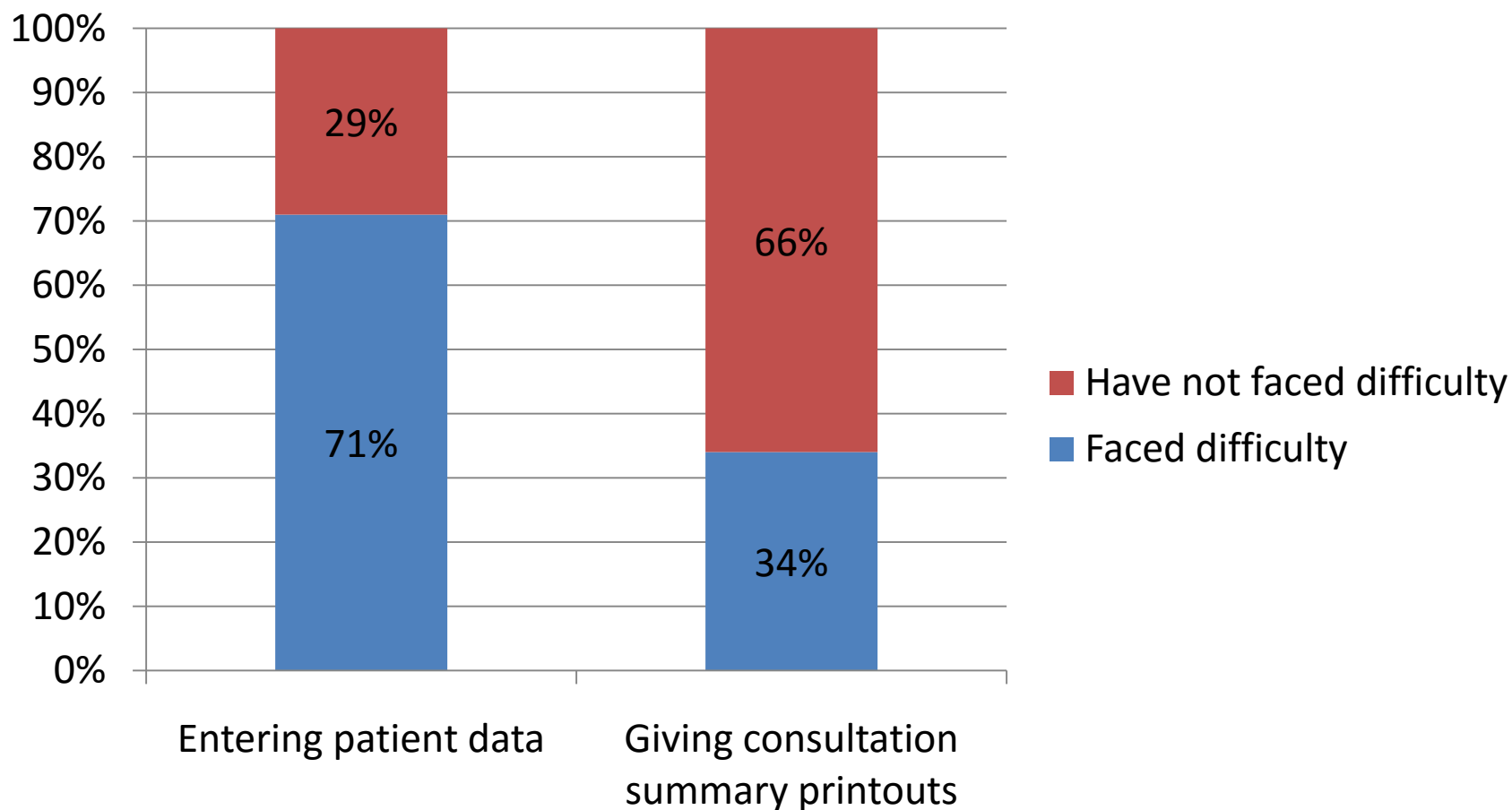
i. User Satisfaction



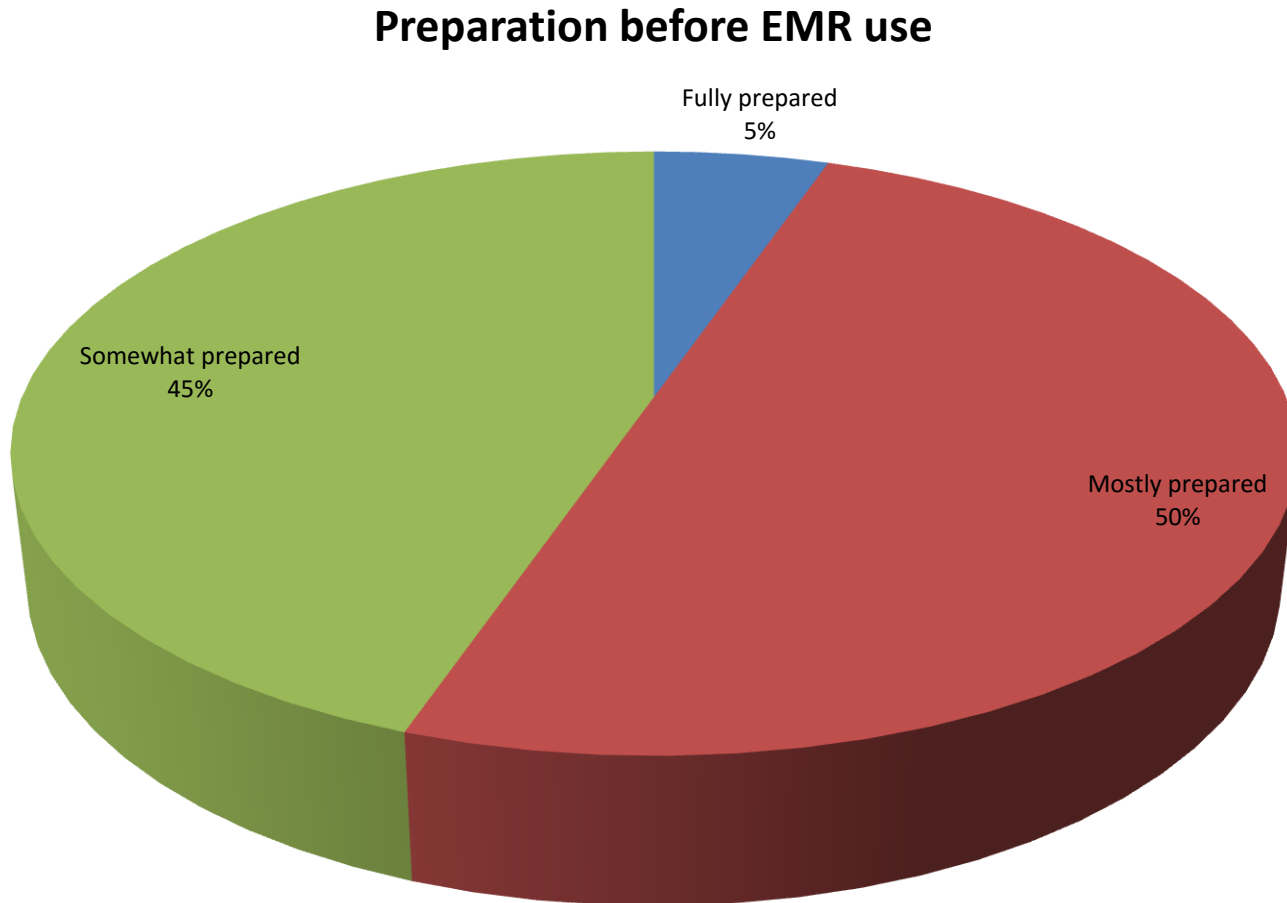
ii. Challenges



b. Issues faced by consultants using EMR for OPD consultations



C. Training



Conclusion

- Findings on user's observation on the viability and productivity of EMR obviously show that clients felt that the EMR is more compelling and more effective contrasted with paper based records.
- Findings on user satisfaction showed that notifications on medication interactions, reminders and cautions on patient with a low Body Mass Index subsequent to having their weight entered in the EMR, visual alerts for low vitals, tests results that are out of range, calculate no of pills, ability to view radiology and lab reports were some of the factors that users credited as having assumed a noteworthy part in the change of nature of patients' care from this study and a key advantage of the EMR. The main challenges that users faced were computer proficiency related and not a system issue.

- Findings on training show us that training was provided to every consultants during the EMR roll out. The training for the users at the two sites was different. There have been rarely any studies on what the ideal training period should be for potential EMR users. There is no literature that has stipulated guidelines or procedure regarding the same.

The training did not encompass the previous exposure or experience to computers. Knowing the potential user's basic computer proficiency would help trainers to estimate the time and effort required to put into the training to make sure the consultants are well prepared to adopt and use the system.

Recommendations

- While training has been iteratively enhanced with time, more work should be done and imaginative methods for tending to training needs.
- All trainings on the EMR ought to be done outside work days since it influences patients' consultation and the learning procedure.
- Proper interactive user manuals with troubleshooting guide should be developed and passed on to every user.
- There should be a knowledge assessment test at the end of every training session.

- Other than the consultants all other clinical staffs like nurses, technicians etc should also be trained as EMR is a part of the bigger HIS and are interlinked.
- Regular training should be conducted as there is a high staff turnover in Narayana Health group.
- Narayana Health should come up with a timeline for implementation at their centres so that users are well prepared in advance before the actual rollout happens.
- There is a need to keep upgrading the system as per the requirements and feedback of the users.

Thank You