Digital Record Keeping vs Manual Documentation – A Comparative Study

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Screenshot of Approval

Certificate of Approval

The Summer Internship Project titled **"Digital Record Keeping vs Manual Documentation – A Comparative Study at Arun Hospital, Port Blair"** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of the **Post Graduate Diploma in Health and Hospital Management**, for which it has been submitted by **Ms Ashna K Varghese**.

It is understood that by this approval, the undersigned does not necessarily endorse or approve any statement made, opinion expressed, or conclusion drawn therein but approves the report only for the purpose it is submitted to.

Dr Anuradha Bhardwaj

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Introduction (1/2)

- Documentation in healthcare means recording patient information, treatment details, and administrative data.
- It is essential for maintaining accurate records, legal evidence, and continuity of patient care.
- Small hospitals often use **hybrid systems**, combining manual files and digital records.
- Manual documentation involves handwritten files stored in physical folders or cartons.
- Digital documentation uses software to record, update, and retrieve patient data electronically.
- **Arun Hospital** is a 30-bedded gynecology and maternity hospital located in Port Blair.

Introduction (2/2)

- The hospital provides services like OPD, IPD, Pharmacy, Radiology, and minor procedures.
- Despite having basic Hospital Information Software, many records are still maintained manually.
- Staff face challenges balancing both methods, especially during peak hours.
- Patients in semi-urban areas are more comfortable with physical prescriptions and paper records.
- This study aims to understand the practical advantages and challenges of both systems in the Registration Department.

Objectives of Your Study

- To observe daily workflow and practices followed by staff.
- To evaluate the time taken for registration and record updating in both systems.
- To identify challenges faced by staff when handling digital tools.
- To understand patient comfort and acceptance of digital vs manual prescriptions.
- To analyze storage and retrieval efficiency of manual files compared to digital records.
- To study the factors limiting full digitalization in a 30-bedded hospital.
- To suggest feasible improvements for better documentation practices.
- To assess how documentation impacts waiting time, data accuracy, and workload.

Methodology (1/2)

Study Setting:

- Arun Hospital, Port Blair
- 30-bedded gynecology hospital
- Focus on Registration Department

Study Design:

- Descriptive observational study

Internship period: **01st May 2025 to 30th June 2025**

Data Collection Methods:

- Direct observation of staff performing registration tasks
- Informal interviews and discussions with receptionists, nurses, and billing staff
- Review of physical records and digital entries
- Recording time taken for manual vs digital documentation

Methodology (2/2)

Data Points Observed:

- Patient load per day
- Time required for registration and record updating
- Errors and duplications in records
- Staff comfort with using the Hospital Information System
- Patient reactions to digital or manual processes
- Storage and retrieval practices
- Barriers to complete digital adoption

Data Analysis

Aspect	Manual Documentation	Digital Documentation
Speed	10–15 mins per record	Faster initial entry
Retrieval	Slow, files stored in cartons	Quick retrieval
Errors	Handwriting errors, misplacement	Less prone to error if trained
Staff Comfort	High, familiar	Low, lack of training
Patient Comfort	High, prefer physical prescription	Low, unfamiliar
Cost	Low setup, storage costs	Higher setup, maintenance

Results (1/3)

- ***Findings from Observations:***

Patient Load:

- Minimum: 10–15 per day
- Maximum: 20–25 per day

Waiting Time:

- Normal days: 10–15 minutes
- Peak hours: 25–30 minutes

Staff Challenges:

- Shortage during evenings
- System errors causing delays
- No formal training in HIS

Results (2/3)

Manual Record Challenges:

- Storage in cartons
- Difficult retrieval
- Time-consuming updating

Digital Record Challenges:

- Occasional software issues
- Lack of familiarity

Patient Acceptance:

- More comfortable with manual prescriptions
- Low awareness about digital records

Results (3/3)

Departments with Digital Systems:

- Registration
- Laboratory billing
- Pharmacy billing
- IPD billing and discharge summaries

Discussion (1/2)

- Manual documentation is still deeply integrated in small hospitals due to familiarity and low cost.
- Digital systems, though beneficial, are underutilized due to:
- Lack of training
- Limited funds for infrastructure
- Patient hesitancy to accept digital processes
- Staff prefer manual systems because:
- They don’t require advanced technical skills
- They are reliable during power cuts or system errors

Discussion (2/2)

- Patients feel safer with physical prescriptions and files they can see and carry.
- Hybrid systems create duplication of work and reduce efficiency.
- To improve, hospitals need:
  - Regular staff training programs
  - Clear SOPs for digital records
  - Awareness drives to help patients trust digital processes

Limitations of Study

- Observations were limited to one small hospital.
- Data collection was done only during a fixed internship period.
- Patient feedback was informal and not quantified.
- Findings may not represent larger hospitals or advanced setups.
- Some data may be biased by subjective observations.
- No financial analysis of long-term cost-benefit of digital systems

Conclusion

- Digital documentation improves speed and accuracy but requires:
  - ❑ Training
  - ❑ Infrastructure
  - ❑ Patient education
- Manual systems remain relevant and comfortable in smaller hospitals.
- A hybrid model is suitable for current needs, with a gradual plan for digital adoption.

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References

1. World Health Organization. Electronic Health Records: Manual for Developing Countries. Geneva: World Health Organization; 2006.
2. Ministry of Health and Family Welfare, Government of India. Standards for Electronic Health Records in India. New Delhi: MoHFW; 2016.
3. HealthIT.gov. Benefits of Electronic Health Records (EHRs). Washington DC: Office of the National Coordinator for Health Information Technology; 2020 [Internet]. Available from: https://www.healthit.gov/topic/health-it-basics/benefits-ehrs
4. Latha S, Venkatesan P. Challenges in Electronic Health Record Implementation in Indian Hospitals. Indian J Public Health Res Dev. 2019;10(12):861–5.
5. Kalra D, Blobel B. Electronic Health Records and the Personal Health Record. Stud Health Technol Inform. 2009;150:279–95.
6. Tripathi S, Joshi S. Barriers to Adoption of Electronic Health Records in Small Hospitals. Int J Healthc Manag. 2020;13(2):121–8.
7. Ministry of Health and Family Welfare, Government of India. Ayushman Bharat Digital Mission: Strategy Overview. New Delhi: MoHFW; 2021 [Internet]. Available from: https://abdm.gov.in
8. McGonigle D, Mastrian KG. Nursing Informatics and the Foundation of Knowledge. 4th ed. Burlington (MA): Jones & Bartlett Learning; 2018.

Final Poster of Internship Presentation

Digital Record Keeping vs Manual Documentation – A Comparative Study
Presented by Ashna K Varghese, Guided by Dr. Anuradha Bhardwaj

Introduction

Documentation in hospitals is essential to maintain accurate patient records, ensure legal compliance, and support quality care delivery. Arun Hospital is a 30-bedded gynecology hospital where both digital and manual documentation methods are used. While the digital system is applied for registration and billing, most case histories and updates remain paper-based. Staff often manage both systems simultaneously, which impacts efficiency, increases workload, and affects patient waiting time. Many patients also prefer manual prescriptions due to familiarity and trust in physical records.

Methods

Project Design: Descriptive and observational study

Duration: 01st May 2025 to 30th June 2025

Types of Data:
Primary data were collected by observing daily registration processes and interviewing staff members involved in patient record-keeping. Secondary data were obtained from reviewing existing manual files and digital records stored in the hospital's Hospital Information Software. Observations included time taken for each method, storage practices, error frequency, and acceptance by staff and patients.

Results

Manual documentation required 10–15 minutes per record, with physical files stored in cartons, making retrieval difficult. Digital registration was faster and more organized but faced occasional system errors and required technical skills. Staff expressed more comfort with manual processes, citing lack of formal training in digital tools. Patients preferred physical prescriptions, especially in a semi-urban setting. Departments partially using digital tools included Registration, Laboratory billing, Pharmacy billing, and IPD discharge records. The hybrid model created duplication of work and delayed updates during peak

Conclusions

A hybrid documentation system is currently functional but less efficient due to dual processes. Digital systems offer clear advantages in speed and data retrieval but require regular staff training, patient awareness, and investment in infrastructure. Manual records remain trusted and easier for staff with basic computer literacy. Gradual, supported digital adoption is recommended to improve operational efficiency without disrupting services. A phased approach may help overcome resistance and enhance patient care quality.

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Thank You

Any Questions

Internship Experiences

What did you learn (skill/ topic)?

During my internship at Arun Hospital, Port Blair, I had the opportunity to study the documentation practices in the inpatient ward and outpatient department. My observation concentrated on the differences between manual and digital documentation, focusing on how patient records are maintained and retrieved.The experience allowed me to understand the practical challenges faced by healthcare staff while recording patient data. I also noted the time delays and errors associated with manual record-keeping and the efficiency of digital methods in improving accuracy, accessibility, and patient flow.Overall, this internship experience boosted my analytical and observation skills and highlighted the importance of training, proper staff allocation, and infrastructure in strengthening effective

Overall self comments on Internship

The internship provided me with a valuable opportunity to connect classroom learning with real-world hospital operations. It gave me deeper insights into the daily challenges healthcare professionals face, especially regarding documentation practices.

I also gained confidence in communicating with hospital staff, collecting data systematically, and presenting findings. This internship helped me grow both professionally and personally, and has reinforced my interest in working within hospital administration and health information systems.

Suggestions Given to Organization

- Regular **training sessions** should be organized to improve staff competence in using the Hospital Information Software and troubleshooting common system errors.
- Clear **standard operating procedures (SOPs)** should be developed to define when and how digital and manual records are updated to avoid duplication of work.
- Awareness programs and **patient education** initiatives can be conducted to help patients understand and trust digital documentation and e-prescriptions.
- The hospital may gradually invest in **upgrading hardware infrastructure** and ensuring stable internet connectivity to reduce downtime during registration.
- A phased approach to **full digital adoption** can be planned, starting with departments like Registration and Pharmacy before expanding to case histories and discharge summaries.
- Periodic **audits of documentation accuracy** and retrieval speed should be conducted to measure improvements and identify gaps in the hybrid system.

Pictorial Journey (1/2)





Pictorial Journey (2/2)



