Module Name: Business Process Management

Module Code: 6055SSL

Assignment Title: Main Coursework Report

Student Name	
Student Id.	

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1. Introduction

Royal Free London NHS Foundation Trust is a leading healthcare provider in the United Kingdom, serving a population of well over a million patients each year through its leading hospitals, namely Royal Free Hospital, Barnet Hospital, and Chase Farm Hospital (The Royal Free London Private Patients Unit, 2025). The Trust is known to be keen on providing quality patient care, applying new technologies, including electronic patient records, and effectively incorporating multidisciplinary teams. The patient discharge process is essential to ensuring a timely flow of patients, adequate bed availability, and continuity of care. Discharge is one of the fundamental processes of operation that directly impacts the hospital's efficiency, patient satisfaction, and the quality of services provided.

This report aims to examine the patient discharge procedure within Royal Free London NHS Trust because it is complex, involves many stakeholders, and has been documented to have challenges, including delays, communication problems, and an administrative backlog. It is these elements that have made it a perfect choice for applying Business Process Management (BPM) concepts, such as design, modelling, execution, monitoring, and optimisation.

The following objectives can be identified in this report:

- To map and assess the present workflow in discharge.
- To use the BPM lifecycle to comprehend the performance gaps.
- To implement evidence-based improvements based on the BPM models, and

2. Process Analysis

2.1 Description of the Current Discharge Process

	Description
Step 1	The treating doctor decides the patient is medically fit for discharge.
Step 2	Doctor updates the Electronic Patient Record (EPR) and completes a draft discharge summary.
Step 3	Nurse receives discharge decision and begins discharge planning tasks.
Step 4	The multidisciplinary team (MDT) assesses follow-up needs.

Step 5	Pharmacy receives prescription request for discharge medications (To Take Outmeds-TTO).
Step 6	• The pharmacy prepares medication • Delays often occur due to workload.
Step 7	• The nurse provides medication • Discharge instructions • Educational information to the patient.
Step 8	Transport (if needed) is arranged and scheduled.
Step 9	Patient leaves the ward; bed is marked as available.
Step 10	Administrative staff finalise documentation and update EPR records.

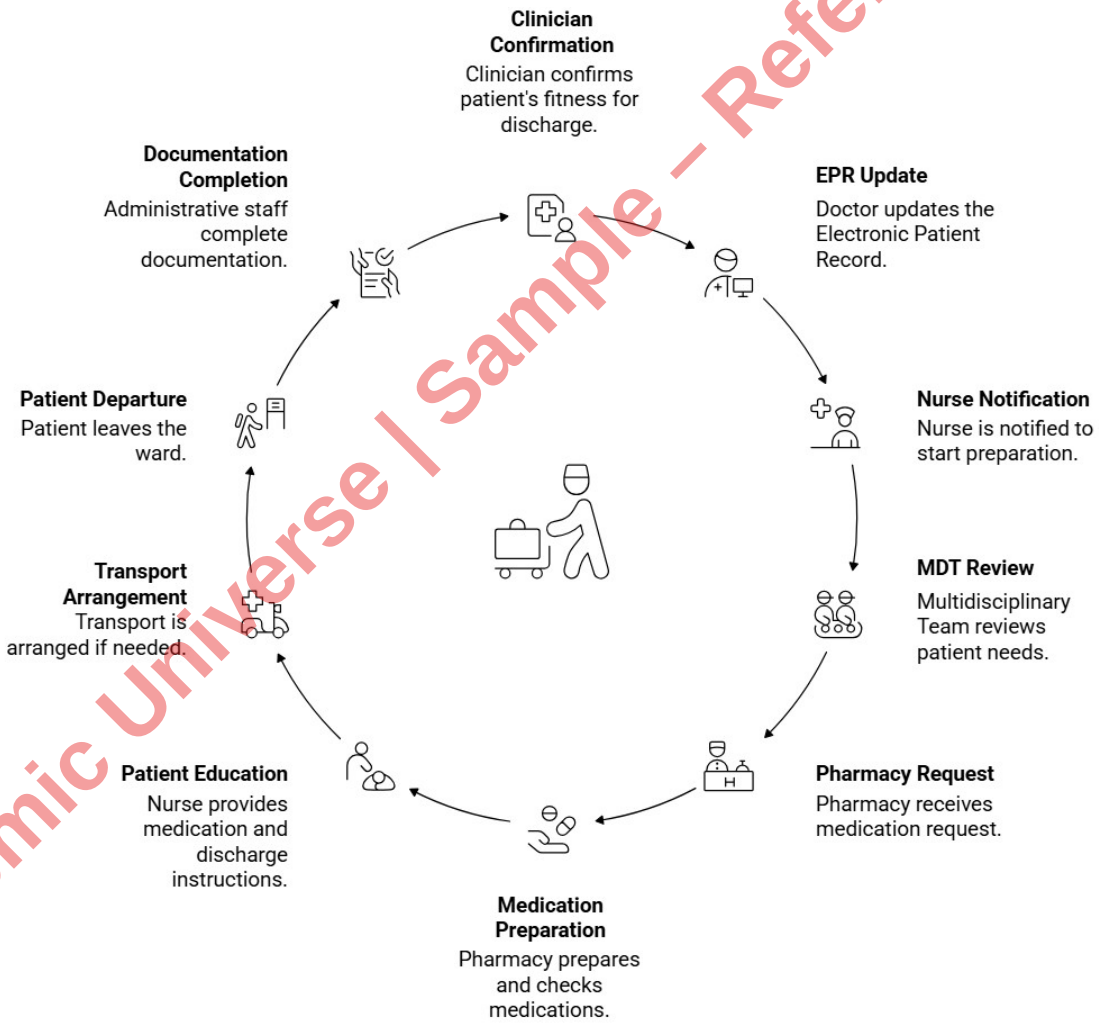

Figure 1 The Current Discharge Process

2.2 Critical Evaluation of Current Performance

a) **Strengths:** Electronic patient records (EPR) are helpful in the discharge process since they facilitate information sharing and minimise paperwork (Mendis *et al.*, 2019). The multidisciplinary intervention also holds that medical, social, and therapeutic requirements are reassessed before discharge.

b) **Weaknesses:** This is manual and requires manual coordination between the staff, which may result in inconsistency and delays. Documentation is usually subject to numerous checks, which is an administrative burden (Levy *et al.*, 2024). Lack of communication among the pharmacy, clinical teams, and nurses consistently impedes workflow.

c) Bottlenecks: The biggest bottleneck occurs in the pharmacy, where high prescription workloads increase the waiting time for discharge medications. The other bottleneck occurs when MDT members are not available at the right time, thereby hampering the evaluation or approval of care.

d) **Errors and Delays:** Mistakes happen when the discharge summaries are either unfinished or have no clinical information. Late decision-making by physicians, last-minute prescription changes, and missing paperwork are among the most common causes of delays (Chen *et al.*, 2025).

e) Impact on Staff and Patients: During high discharge times, staff members feel overwhelmed and stressed, especially nurses who make numerous steps at a given time. Long waiting lists, uncertainty, and frustration characterise discharge day

Issue	Source of Bottleneck	Impact
Delay in TTO medication	Pharmacy workload	Longer patient waiting, late discharge
MDT availability issues	Scheduling gaps	Delayed assessments & approvals
Transport delays	Limited availability	Discharge slowed at the final stage
Late clinical decisions	Doctors' workload	Morning backlog and bed management issues

3. Application of BPM Lifecycle

3.1 Process Design

The Royal Free London NHS Trust has designed its patient discharge process with patient safety, efficient hospital discharge, and the provision of all necessary clinical and support arrangements in mind. The process is performed to ensure medical readiness for discharge, develop clinical records, organise multidisciplinary assessments, plan discharge medications, and arrange follow-ups.

The main medical assessment inputs will be patient records, medication prescriptions, and input from social care or therapy teams; the main outputs will be completed discharge summaries, patient education materials, medication packs, and updated electronic records. There are various rules and requirements, including NHS discharge standards, safety verification protocols, completion of electronic patient records (EPR), and basic requirements, such as clinical stability, medication reconciliation, and safeguarding considerations that control the process.

3.2 Process Modelling

The existing process can also be illustrated by a sequential model showing how the patient moves from being medically fit to leave the hospital to being documented and leaving the ward. Through its workflow modelling, the workflow is displayed relative to its predecessors and dependencies, highlighting the interactions among clinicians, nurses, pharmacy staff, and administrative teams.

As can be seen in the AS-IS diagram, it is a linear yet interdependent process, with the delay in any of the areas, especially pharmacy, MDT review, or clinician documentation, leading to new congestion down the line. The inefficiencies identified using this model include duplication of information, communication challenges, and wait times, which offer a basis on which the process conducts itself in actual situations

3.3 Process Execution

In practice, the discharge process operates in a dynamic clinical setting, where time pressures, staffing constraints, and real-time communication issues affect workflow efficiency. Clinicians are the initiators of the process, who decide that a patient is ready to leave, and this is followed by documentation, patient education, and practical preparations by nurses.

People can also spend a lot of time dispensing discharge medications; this task is performed by pharmacy staff, which can lead to significant delays if the prescription set is substantial. Electronic Patient Records (EPR) systems like EPIC facilitate the communication of documentation, but they depend on the timeliness of input from all personnel.

3.4 Process Monitoring

KPI	Description / Purpose	Data Source / Monitoring Method
Discharge waiting time	Measures time from "medically fit" to actual discharge.	EPR timestamps, ward logs, discharge dashboards.
Pharmacy turnaround time (TTO meds)	Tracks the duration between prescription submission and medication release.	Pharmacy dispensing system, automated logs.
Bed availability rate	Indicates how fast beds become free after discharge.	Bed management system, ward occupancy reports.
MDT assessment completion time	Measures delays in social care, therapy, and specialist reviews.	MDT scheduling records, EPR entries.
Documentation accuracy/error rate	Identifies missing or incomplete discharge summaries.	EPR audit reports, quality assurance checks.

3.5 Process Optimisation

Recent enhancements include the implementation of electronic patient records, which facilitate documentation, and the deployment of discharge coordinators within the wards to enhance internal communication and prioritise early patient discharge. Some wards also use morning MDT huddles to ensure staff agree with the anticipated discharge volumes for the day.

These loopholes lead to unnecessary time waste, task overlap, and a lack of visibility into process bottlenecks, which offer considerable business opportunities for

redesigning and reengineering the work process, implementing some degree of automation, and enhancing cross-team communication.

4. Improvement Strategy

4.1 Proposed Improvements

Workflow Redesign: Redesigning the discharge workflow entails reorganising the sequence and timing of activities so that tasks can happen in parallel rather than in a linear, dependent manner. Regarding this, the MDT reviews, discharge summary preparation, and medication prescription process could be initiated sooner in the patient's stay, rather than waiting for the official decision that the patient is medically fit. An early release checklist and the establishment of a predicted discharge date within the first 24-48 hours would assist staff in planning and avoiding a last-minute rush. The redesigned workflow minimises wasted waiting time, eliminates duplication, and enhances integration between clinical and non-clinical teams by clarifying responsibilities and making them more predictable.

Digitalisation and Automation: Increased digitisation has the potential to significantly reduce time wasted on paperwork, manual data entry, and disjointed documentatio (Atasoy, Greenwood and McCullough, 2018). We can automate routine components of the discharge summary to ensure that information is correct and has been previously completed. Using pharmacy systems connected to the EPR enables timely communication once the prescription is keyed in, and automated prioritisation of cases highlighted in urgent TTO requests. Digital dashboards with live bed occupancy levels, discharges pending, pharmacy load, and MDT actions can give staff immediate insight into the workflow. These technologies reduce administrative burden, the need to wait for information, and help ensure a more effective handover.

Resource Optimisation: Improving the distribution of personnel and resources, including pharmacy space, porters, and delivery services. Among the improvements that can be made is deploying ward-based pharmacy technicians during high-discharge hours to prepare medications in advance, removing bottlenecks. Likewise, team communication and constant attention to overdue tasks by appointing a specific discharge coordinator on every ward will help achieve control over the work at any given time of the day. They can make staffing schedules to coincide with peak

discharge times, which usually occur from mid-morning to early afternoon. Hence, the right people are present when discharges are most significant. Digital booking systems can also be used to schedule transport resources more efficiently by predicting demand based on the number of discharges expected.

Training and Coordination Developments: Better training would increase staff knowledge of discharge practices, documentation requirements, and the use of EPR tools, thereby reducing errors and speeding task execution (Torab-Miandoab *et al.*, 2025). Frequent inter-clinical, inter-nurse, inter-pharmacy, and inter-administrative briefings increase understanding of expectations and day-to-day priorities. Implementing standard discharge communication procedures will help eliminate ambiguity and ensure that all stakeholders receive the same information. High-priority discharges, role clarification, and delay prevention can be identified during morning team huddles. Figure 2 shows the improvements sequence of process.

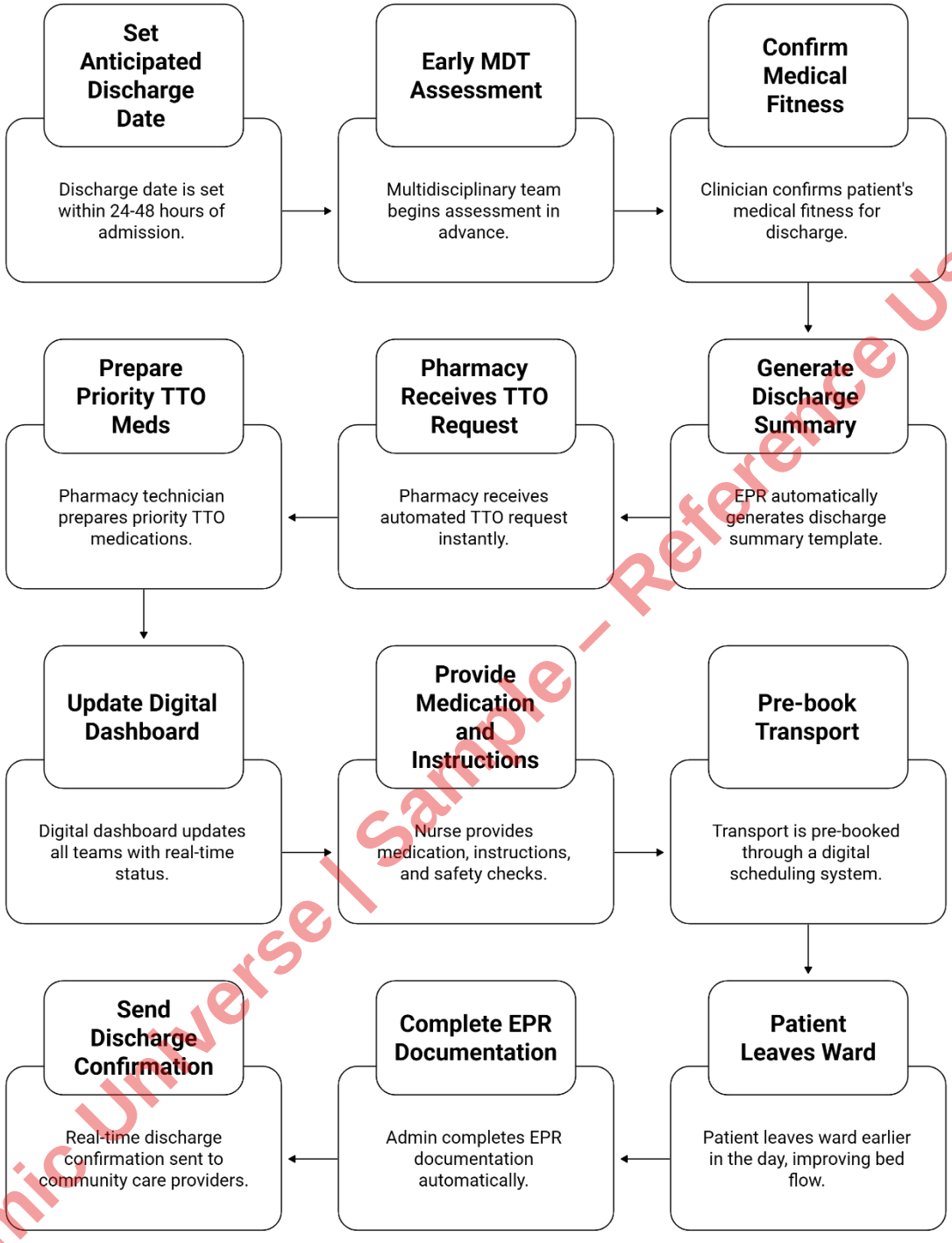

Figure 2 Proposed Improvements in Process

4.2 Justification of Recommendations

Framework	How it Relates	Improvement	It	Impact Area

		Supports	
Lean (AlManei, Salonitis and Tsinopoulos, 2018)	Removes waste, reduces waiting, improves flow.	• Workflow redesign • Digitalisation	Efficiency and speed
Six Sigma (Da Silva *et al.*, 2019)	• Reduces errors • Increases process consistency.	• Automation • Staff training	Quality and safety
BPM Lifecycle (De Morais *et al.*, 2014)	a) Provides a structured analysis of the design b) Modelling c) Execution d) Monitoring e) Optimisation	All improvements	Holistic process control
Bottleneck Analysis	Identifies constraints and delays	• Resource optimisation • Workflow redesign	Throughput and capacity
Theory of Constraints (TOC) (Şimşit, Günay and Vayvay, 2014)	Focuses on improving the single most significant limiting factor.	Pharmacy support, transport scheduling	Faster discharge
Change Management	Ensures staff adoption of new processes and digital tools.	Training and coordination	Behavioural alignment

4.3 Expected Benefits

a) **Efficiency Gains:** Re-engineered processes and computer-based mechanisation also save a lot of time being wasted in needless waiting, data keying in by hand, and duplicated communication. Employees will be able to complete their tasks earlier in the day, and real-time dashboards will enhance decision-making. This results in a flow of operations, improved planning, and more predictable daily discharges.

b) **Faster Discharge Time:** The prior documentation of the discharge, increasingly quick turnaround of medication, and the increased clarity of roles allow patients to get out of the hospital earlier, when they are medically sound.

c) **Reduced Bed-Blocking:** Quick discharge also has a direct benefit of improving bed availability in the hospital, so the high patient demand and emergency admissions into the hospital will be better managed.

d) **Better Patient Experience:** The patients will enjoy shorter waiting time on the discharging day, better communication, and teamwork between staff members. Automation helps prevent medication or documentation errors, increasing patient safety and confidence.

e) **Improved Communication:** Online instruments, a standard dashboard, and methodological coordination practices decrease the communication discrepancies amongst the nurses, clinicians, pharmacy teams, and administrative employees. Real-time communication helps keep everyone informed of discharge priorities and unfinished duties, leading to more standardised and dependable handovers.

5. Responsible Management Considerations

5.1 Sustainability

Sustainability-wise, an enhanced discharge procedure is related to economic efficiency, as unnecessary hospitalisation and the effective utilisation of available resources, including staffing, medicine, and bed capacity, are maximised (Abuzied *et al.*, 2021). Social sustainability is also achieved through the safe discharge of patients and proper follow-up care, necessary to avert readmission and ensure community well-being.

5.2 Ethics in Patient Care

Ethical aspects of patient discharge include whether patients are informed, whether they are well cared for in the hospital, and whether they feel well-assisted upon discharge. Delays or mistakes may put patients at risk, and therefore, effective communication and documentation are critical ethical requirements (Howick *et al.*, 2024). By improving coordination, vulnerable patients, such as those with limited mobility or complex needs, will not be disadvantaged by the system's inefficiencies, advancing the values of fairness, autonomy, and beneficence.

5.3 Stakeholder Accountability

Various stakeholders are involved in the discharge process, including clinicians, nurses, pharmacists, social workers, administrators, and patients. They both have a role to play to ensure their side of the process is done right and at the right time. The management needs to be accountable, transparent, and to collaborate. The hospital does so by articulating expectations for every team and training them appropriately to establish a culture in which stakeholders will pull towards timely discharge and safety.

5.4 Implications of Fairness, Transparency, and Safety

Introducing better discharge procedures should result in a merit-based system where every patient receives fair and prompt care, regardless of their complexity or social status. The transparency process is supported by online technologies that enable employees to monitor progress and observe delays, thereby fostering clarity in duties. The benefits of improving safety include improved documentation, reduced medication errors, and improved communication.

6. Conclusion and Recommendations

The patient discharge workflow, according to the Royal Free London NHS Foundation Trust analysis, is necessary to implement patient flow control but is overloaded with delays, poor communication, and ad hoc coordination between clinical and administrative teams. AS-IS showed significant bottlenecks in pharmacy turnaround time, MDT availability, and documentation completion in the EPR system. Using the BPM lifecycle, it was shown that the problems stem from structural and operational shortcomings, such as the sequential combination of tasks, manual processes, and limited monitoring visibility. Based on the assessment, it was revealed that

inefficiencies directly affect the patient experience, staff workload, and bed availability, and that the discharge process is a key area for systematic improvement.

There are several significant recommendations, such as redesigning the workflow to facilitate prompt, parallel work; greater digitalisation and automation of the documentation process; workforce and pharmacy resource optimisation; better training; and the coordination of multidisciplinary teams. The changes will help reduce discharge waiting times, enhance communication, and increase patient safety. In the future, such practical improvements will have greater consequences for the Trust: they can enhance the financial stability of its operations, contribute to a more sustainable bed-related administration, and deliver a replicable framework for optimising other clinical procedures. Further investment in digital tools, employee training, and evidence-based surveillance will help the organisation maintain efficient processes and adapt to increasing patient demand and evolving healthcare needs.

7. References

Abuzied, Y. et al. (2021) 'Reducing the length of stay by enhancing the patient discharge process: using quality improvement tools to optimize hospital efficiency,' Global Journal on Quality and Safety in Healthcare, 4(1), pp. 44–49. https://doi.org/10.36401/jqsh-20-27.

AlManei, M., Salonitis, K. and Tsinopoulos, C. (2018) 'A conceptual lean implementation framework based on change management theory,' Procedia CIRP, 72, pp. 1160–1165. https://doi.org/10.1016/j.procir.2018.03.141.

Atasoy, H., Greenwood, B.N. and McCullough, J.S. (2018) 'The Digitization of Patient Care: A review of the effects of electronic health records on health care quality and utilization,' Annual Review of Public Health, 40(1), pp. 487–500. https://doi.org/10.1146/annurev-publhealth-040218-044206.

Chen, Y.-W. et al. (2025) 'Factors associated with delayed order-to-administration time in the emergency department: a retrospective analysis,' BMC Emergency Medicine, 25(1), p. 74. https://doi.org/10.1186/s12873-025-01229-5.

Da Silva, I.B. et al. (2019) 'A new Lean Six Sigma framework for improving competitiveness,' Acta Scientiarum. Technology/Acta Scientiarum. Technology, 41(1), p. 37327. https://doi.org/10.4025/actascitechnol.v41i2.37327.

De Morais, R.M. et al. (2014) 'An analysis of BPM lifecycles: from a literature review to a framework proposal,' Business Process Management Journal, 20(3), pp. 412–432. https://doi.org/10.1108/bpmj-03-2013-0035.

Howick, J. et al. (2024) 'How does communication affect patient safety? Protocol for a systematic review and logic model,' BMJ Open, 14(5), p. e085312. https://doi.org/10.1136/bmjopen-2024-085312.

Levy, D.R. et al. (2024) 'Defining documentation burden (DocBurden) and excessive DocBurden for all health professionals: A scoping review,' Applied Clinical Informatics, 15(05), pp. 898–913. https://doi.org/10.1055/a-2385-1654.

Mendis, K. et al. (2019) 'Electronic Patient Records -the reality,' ResearchGate [Preprint]. https://www.researchgate.net/publication/332913336_Electronic_Patient_Records_-the_Reality.

Şimşit, Z.T., Günay, N.S. and Vayvay, Ö. (2014) 'Theory of Constraints: A Literature review,' Procedia - Social and Behavioral Sciences, 150, pp. 930–936. https://doi.org/10.1016/j.sbspro.2014.09.104.

The Royal Free London Private Patients Unit. (2025). Royal Free Hospital | Private Healthcare | Royal Free London. [online] Available at: https://www.royalfreeprivatepatients.com/hospitals/royal-free-hospital/

Torab-Miandoab, A. et al. (2025) 'The impact of electronic medical records on clinical documentation: A case study,' Journal of Education and Health Promotion, 14(1), p. 246. https://doi.org/10.4103/jehp.jehp_320_24.