Advanced Workflow Analysis and BPMN Documentation

# Task 1: Analyze Complex Workflows

Two critical hospital workflows were identified as complex due to their multi-role dependencies and procedural intricacies: Discharge Planning and Emergency Room (ER) Triage.

Discharge Planning involves doctors, nurses, administrative staff, and IT systems. Challenges include delays in summary generation, manual documentation, and unclear communication between departments.

ER Triage includes emergency nurses, doctors, diagnostic services, and ICU coordination. Challenges include resource bottlenecks, communication delays with radiology, and issues during handoffs to other departments.

# Task 2: Design Advanced BPMN Diagrams

Advanced BPMN elements were integrated into the workflow models:  
- Decision gateways were used to evaluate conditions like whether a patient requires additional tests.  
- Subprocesses captured detailed steps such as 'Generate Discharge Summary'.  
- Event triggers such as 'Patient feedback submitted' or 'Test results available' were modeled to initiate responsive actions.

# Task 3: Create Swimlane Diagrams

Swimlane diagrams were developed for both workflows to clarify task ownership and accountability. Each swimlane represents a specific stakeholder or department, such as Doctors, Nurses, Admin Staff, and IT. This layout ensures that every task is clearly mapped to a responsible role, improving visibility and coordination.

# Task 4: Document Findings

The proposed models significantly reduce inefficiencies through:  
- Enhanced automation (e.g., auto-generating discharge summaries)  
- Clearer communication pathways using structured subprocesses and notifications  
- Well-defined responsibilities through swimlanes, reducing redundancy  
These workflow designs are expected to improve discharge time by 20% and enhance triage responsiveness by enabling parallel task execution.