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Contemporary challenges in national and european health care systems

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Title: Innovation and Change in Healthcare Technology

- Introduction: Clinical Relevance of Project Management
- The Project Lifecycle & The Project Lead
- Planning Tools: WBS & Gantt Charts
- Execution: Team Dynamics & Communication
- Risk Management (Patient Safety & Project Health)
- Project Closure & Clinical Audit

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Why Project Management in Healthcare?

- **Efficiency:** Optimizing limited healthcare resources.
- **Quality:** Implementing systematic improvements (Quality Improvement - QI).
- **Safety:** Reducing errors through structured planning.
- *"Leading a project is a core competency for modern clinicians."*

Clinical Example: **Efficiency**

The Problem: Long waiting times for discharge prescriptions.
The Approach: Don't just "work harder." Treat it as a project.
The Solution:

Analyze root causes.
Implement a new Pharmacist-Resident workflow.
Measure results (Reduced wait times).
Small projects drive big clinical changes.



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What is a Healthcare Project?

Scientific Definition: "A temporary endeavor undertaken to create a unique product, service, or result."

Project vs. Routine Operation:

- o Re: Daily Ward Rounds, Dispensing (Continuous). outin
- o Project: Implementing a new Sepsis Protocol (Has a start and end date).



Characteristics of Healthcare Projects

1. Temporariness: Defined timeline (Start -> Finish).
2. Uniqueness: Tailored to specific patient populations or departments.
3. Complexity: Involves regulatory (FDA/EMA), ethical, and logistical layers.
4. Interdisciplinary: Doctors + Pharmacists + Nurses + Admin. 5. Impact: Direct effect on patient safety and community health.

The Iron Triangle of the Project Managment

Three Constraints:

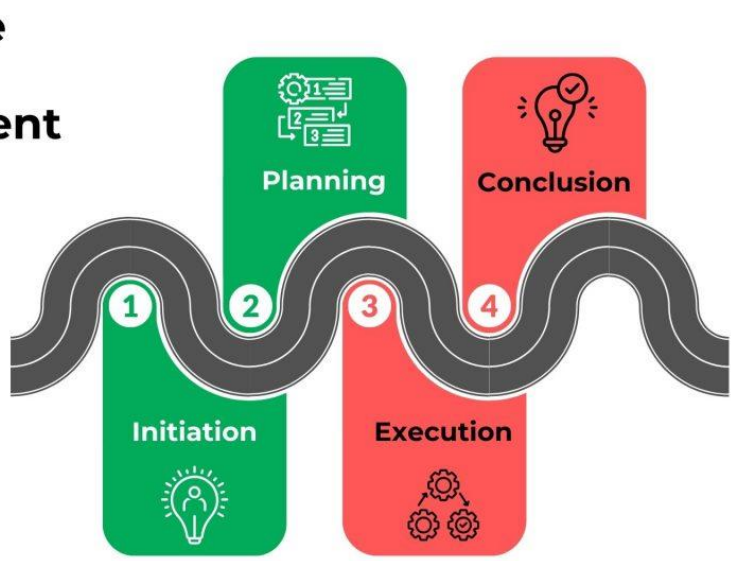
1. Time: Deadlines (e.g., Flu Season start).
2. Cost: Budget & Human Resources.
3. Scope: What is included/excluded?



Rule: You cannot change one side without affecting the others.
Quality sits in the center

The Project Lead (PgM)

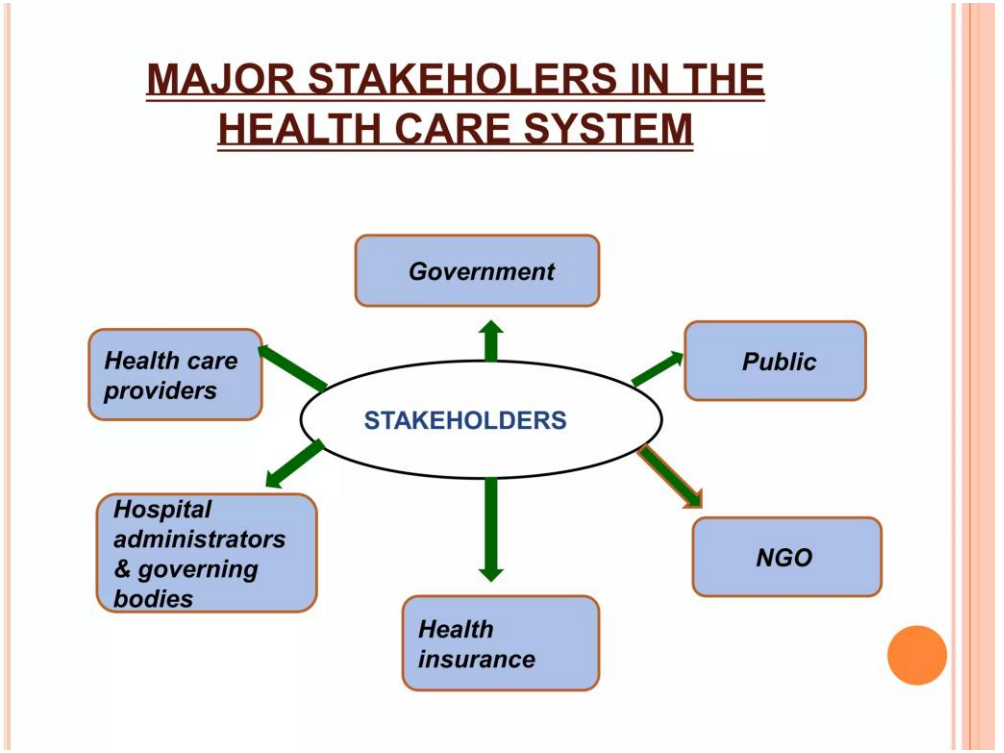
- **Who is the PgM?** often the Lead Doctor, Chief Pharmacist, or Researcher.
- **Responsibilities:**
  - Defining Clinical Goals.
  - Optimizing Staff Utilization.
  - Monitoring "Vital Signs" of the project.
  - Managing Stakeholders (Admin, Patients, Staff).



Stakeholder Matrix

Identify: Who is affected? (Patients, Hospital Board, Nurses, Insurers).
Map:
- o High Influence / High Interest: Key Decision Makers (e.g., Head of Dept).
- o Low Influence / High Interest: Patient Groups / Junior Staff.
- o High Influence / Low Interest: Finance Dept.

Strategy: Engage early to prevent resistance.



The 5 phases of the project life cycle

01	02	03	04	05
Initiation	Planning	Execution	Monitoring	Closure
Initiation is the project kick-off phase. This is when you collect all the information needed from key stakeholders. This phase defines the problem and details what needs to be done.	**The planning phase is the foundation for the project.** This is when you detail all the work, how you plan on doing it, and what resources you'll need to meet project goals.	**The execution phase is when you get stuff done.** This is where you put everything you planned into motion and complete deliverables to achieve the project objectives.	**The monitoring phase goes hand-in-hand with the execution phase.** It's about monitoring the project's overall progress to see if you're meeting project objectives and are on track.	**The closure phase wraps things up.** You'll hand over documentation, release final deliverables, terminate contracts, and inform everyone that the project is complete.

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Project Planning

"Execution without planning is like prescription without diagnosis."

Key Steps:

- Approve Charter (Goals).
- Identify Stakeholders
- Build Schedule (Gantt).
- Assess Risks.
- Define Budget.



SMART Objectives

- Specific (Target a specific area/outcome).
- Measurable (Quantifiable indicators).
- Achievable (Realistic given resources).
- Relevant (Aligned with patient care/hospital goals).
- Time-bound (Deadlines).

Example: "Reduce medication errors in the ICU by 15% within 6 months."



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Work Breakdown Structure (WBS)

Definition: A hierarchical decomposition of the total scope of work.
Purpose: "Surgical dissection" of a complex project into manageable parts.
Benefit: Prevents teams from being overwhelmed.

WBS Structure

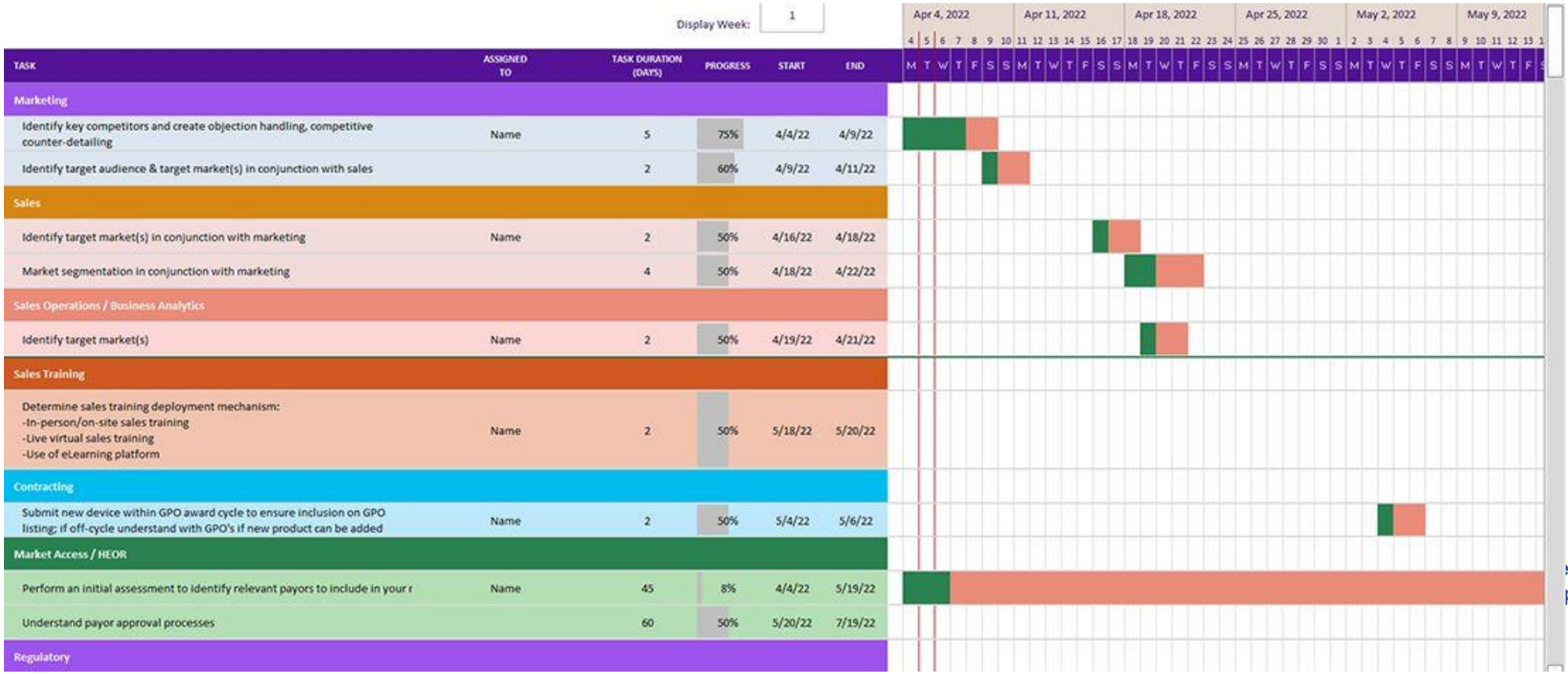
Level 1: Project Title (e.g., New Vaccination Clinic).
Level 2: Milestones (Logistics, Staffing, Public Awareness).
Level 3: Work Packages (Actionable tasks).
Example: "Order Refrigerators," "Train Nurses," "Print Leaflets."
Deliverable: The final tangible result.

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Gantt Charts

- **What is it?** A visual timeline of the project.
- **Function:**
  - Planning (When do we start?).
  - Organizing (Who does what?).
  - Monitoring (Are we late?).
- **Visualizes Dependencies:** Task B cannot start until Task A finishes.



Display Week: 1

TASK	ASSIGNED TO	TASK DURATION (DAYS)	PROGRESS	START	END
Marketing					
Identify key competitors and create objection handling, competitive counter-detailing	Name	5	75%	4/4/22	4/9/22
Identify target audience & target market(s) in conjunction with sales		2	60%	4/9/22	4/11/22
Sales					
Identify target market(s) in conjunction with marketing	Name	2	50%	4/16/22	4/18/22
Market segmentation in conjunction with marketing		4	50%	4/18/22	4/22/22
Sales Operations / Business Analytics					
Identify target market(s)	Name	2	50%	4/19/22	4/21/22
Sales Training					
Determine sales training deployment mechanism: -In-person/on-site sales training -Live virtual sales training -Use of eLearning platform	Name	2	50%	5/18/22	5/20/22
Contracting					
Submit new device within GPO award cycle to ensure inclusion on GPO listing; if off-cycle understand with GPO's if new product can be added	Name	2	50%	5/4/22	5/6/22
Market Access / HEOR					
Perform an initial assessment to identify relevant payors to include in your r	Name	45	8%	4/4/22	5/19/22
Understand payor approval processes		60	50%	5/20/22	7/19/22
Regulatory					

Action Plan

Detailed Strategy: "The Ward List for Projects."
Columns:
Task: Specific Activity.
Responsible: Who is doing it? (Dr. X, Pharm Y).
Deadline: When is it due?
Status: Pending / In Progress / Done.

Team Management

Clinical Leadership:
Assign roles based on competency.
Foster "Psychological Safety" (Junior staff can speak up)
Mediate inter-professional conflicts.
Organize collaborative rounds/meetings

Effective Teams

Composition: Multidisciplinary (MDs, PharmDs, RNs).
Roles: Clear definition of who does what.
Communication: Open, non-hierarchical regarding safety/project risks.
Conflict Resolution: Focus on the problem, not the person.

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Communication

- **The Backbone of Safety:**
  - Prevents errors.
  - Keeps stakeholders engaged.
  - Ensures transparency.
- *Most project failures are due to poor communication.*

Communication Plan

•Internal: Team Huddles, WhatsApp groups, shared drives.
•External: Formal reports to Hospital Administration/Ethics Boards.
•Method: Structured (e.g., SBAR: Situation, Background, Assessment, Recommendation).



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Monitoring Progress

Project Vital Signs:

- Are we on time?
- Are we on budget?
- Is the quality/scope correct?

Tools:

- Regular Status Reports.
- Variance Analysis (Planned vs. Actual).
- Corrective Actions (Intervention).



Risk Management

- **Definition:** "An uncertain event that, if it occurs, has an effect on objectives."
- **Clinical Equivalent:** Preventing Adverse Events.
- **Goal:** Identify risks *before* they become issues.

Categories

Technical/Clinical: Equipment failure, adverse drug reactions in a trial.
Organizational: Staff shortages, budget cuts.
External: Regulatory changes, pandemic surges

Risk Classification

Risk Matrix: Probability vs. Impact.

- Low: Acceptable.
- Medium: Needs Monitoring.
- High: Requires Immediate Mitigation.

Prioritize resources to the highest risks (Triage)

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Risk Response

- Low Risk: Accept (Monitor).
- Medium Risk: Corrective Measures (Have a Plan B).
- High Risk: Preventive Measures (Act now to reduce probability).

Example: Risk of low recruitment -> Preventive: Open more clinic sites.

Risk Breakdown Structure (RBS)

- Categorization Tool: Ensures no area is overlooked.
- Structure:

Project -> Technical -> External -> Organizational -> Clinical.

Systematic approach to safety.

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Closing Activities

The "Discharge Summary":

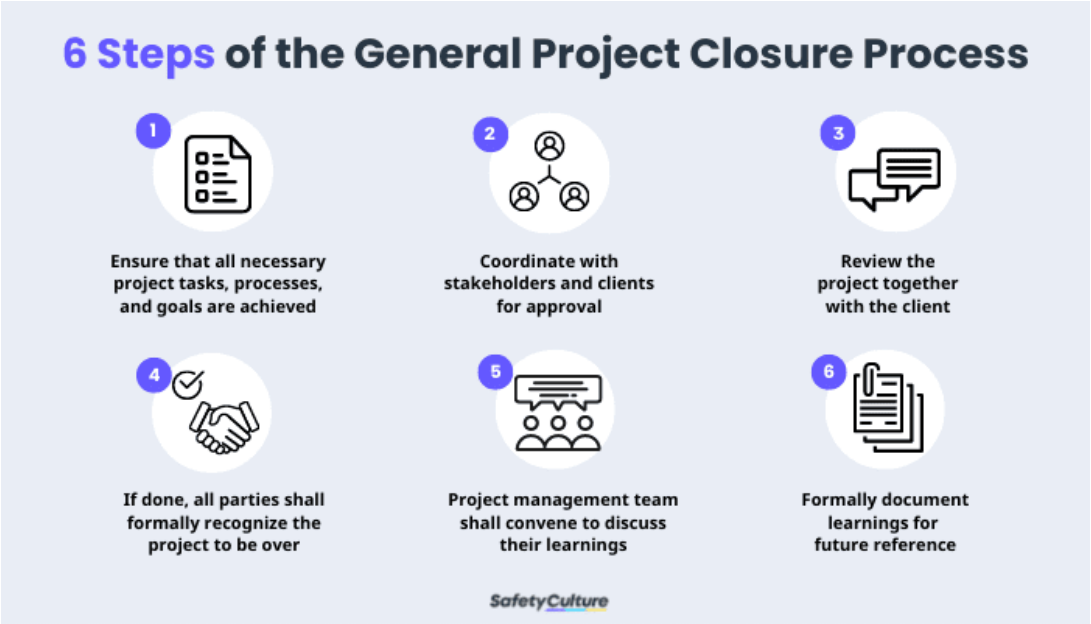
- Confirm all deliverables (results) are achieved.
- Handover to operations (Standard of Care).
- Archive documents (Audit trail / Regulatory requirement).
- Close-out Meeting.

Lessons Learned & Evaluation

Evaluation: Did we meet the SMART objectives?
Lessons Learned (M&M):

- What went well?
- What went wrong?
- How can we improve for the next project?

Sharing knowledge prevents future errors.



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Conclusion

- Success: Achieving clinical goals through structure.
- Transformation: Turning ideas into patient outcomes.
- Efficiency: Doing more with limited resources.
- Change: Empowering you to lead healthcare improvement.



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