**Conceptual Care Intervention Mapping – Prototype Plan**

**1. Objective**

* Demonstrate **how predicted member risk can be linked to potential care interventions**.
* Show **actionable insights and ROI** for stakeholders (hospitals, payers) without deploying real interventions.
* Illustrate the **value of predictive modeling** for proactive care management.

**2. Conceptual Care Intervention Mapping Plan**

**Step 1: Define Risk Tiers**

* Use **risk scores generated by the model** (30/60/90-day windows) to stratify members into **five tiers**:
  1. Very High
  2. High
  3. Moderate
  4. Low
  5. Minimal

**Step 2: Map Interventions Conceptually**

* Assign **example interventions** to each risk tier based on typical care strategies:

| **Risk Tier** | **Conceptual Interventions** |
| --- | --- |
| Very High | Intensive case management, personalized outreach, telehealth check-ins |
| High | Preventive care reminders, nurse follow-ups, care coordination |
| Moderate | Health education programs, wellness coaching, periodic check-ins |
| Low | General preventive care recommendations |
| Minimal | Standard monitoring and automated alerts |

* **Important:** These are **illustrative only**, used to show functionality in the prototype.

**3. Modeling Plan for Intervention Mapping**

**Step 1: Input**

* **Member risk file** generated from the prediction model:
  + Member ID
  + 30/60/90-day risk scores
  + Assigned risk tier

**Step 2: Intervention Mapping Logic**

* A simple **rule-based model**:
  + Each risk tier is linked to a **predefined set of interventions**.
  + Optionally, include **ROI estimates** for each intervention, using historical or simulated cost data.

**Step 3: Output**

* A **member-intervention mapping file** (CSV/JSON):
  + Member ID
  + Risk tier
  + Recommended interventions
  + Estimated ROI / cost savings

**4. Integration with Visualization / Dashboard**

1. **Input to Frontend**
   * Dashboard reads the **member-intervention file** along with the **risk score file**.
2. **Visualization Components**
   * **Risk Tier Distribution** → Shows counts per tier.
   * **Member Trajectories** → Shows individual member risk over time.
   * **Intervention Mapping Panel** → Displays suggested interventions per member or per risk tier.
   * **ROI Simulation Chart** → Visualizes potential cost savings for applying interventions to high-risk members.
3. **Interactive Features**
   * Allow filtering by **risk tier, window (30/60/90 days), or member characteristics**.
   * Clicking a member shows **predicted risk, risk trajectory, and suggested interventions**.

**5. Prototype Scope**

* Demonstrates **functionality and predictive insights** using:
  + Predicted risk scores
  + Rule-based intervention mapping
  + Dashboard visualization
* **Does not execute real interventions**.
* Enables stakeholders to see **how predictive analytics can guide proactive care**.

**6. Expected Outcomes**

* Clear visualization of **member risk and recommended interventions**.
* Demonstration of **predictive power** through 30/60/90-day risk scores.
* Simulation of **actionable insights and ROI** for high-cost member management.
* Prototype-ready, **production-scalable design** for future real-world deployment.

**Proactive care** means identifying and addressing potential health issues before they become severe, involving patients in a personalized plan to manage their health and prevent decline.