Slide 1 – Title & Introduction

Heart Disease Survival Analysis & Insights Dashboard

Subtitle: Data-Driven Approach to Identify High-Risk Patient Groups

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Introduction:

- Built an **interactive Power BI dashboard** analyzing 299 patient records.
- Dataset includes demographics, lifestyle factors, and clinical measurements.
- Goal: Identify **factors affecting survival** and help clinicians prioritize interventions.

Slide 2 - Problem Statement

Business Problem:

- Cardiologists and hospital management lack **clear, visual insights** into:
  - Which **patient segments** have lower survival rates.
  - How **clinical measures** (Ejection Fraction, Creatinine, Sodium) impact survival.
  - Influence of **lifestyle & comorbidities** (Smoking, Diabetes, High BP, Anaemia).

Impact of the Problem:

- Delayed intervention for high-risk patients.
- Inefficient allocation of monitoring and treatment resources.

Slide 3 – Data & Methodology

Data Source:

299 patient records from a heart disease dataset.

Key Features:

- Age, Gender, Smoking, Diabetes, High BP, Anaemia
- Clinical: Ejection Fraction, Creatinine, Sodium, Platelets, CPK Enzyme
- Follow-up period & Death Event

Methodology:

01

Data Cleaning & Transformation

Created Age Groups, Risk Factor Flags.

02

DAX Measures

Calculated Survival Rate, Avg Age of Survivors, Missing Data %.

03

Visual Design

KPI cards, combo charts, Sankey diagram for risk factors.

04

Insight Extraction

Compared cohorts across demographics and clinical indicators.

Slide 4 – Key Insights

Overall survival rate:

67.89% (Avg Age of Survivors: 58.76 years).

Age factor:

Survival rate drops from ~75% (40–60 yrs) to ~40% (71+ yrs).

Ejection Fraction:

<30% strongly linked to higher mortality.

Serum Creatinine:

>1.6 mg/dL correlates with reduced survival.

Comorbidities:

Diabetes + High BP + Age > 60 = critical risk group.

Lifestyle:

Smoking prevalence higher in 51–70 age range, but impact less severe than EF/Creatinine in this dataset.

Slide 5 - Recommendations & Next Steps

Recommendations:

Early Screening:

Patients > 60 with EF < 35% should receive priority monitoring.

Targeted Care Plans:

Special programs for patients with Diabetes + High BP.

Regular Kidney Function Checks:

Track creatinine for at-risk groups.

Next Steps:

Integrate real-time patient data

into dashboard for ongoing monitoring.

Add predictive model

to forecast survival probability for new patients.

Deploy for clinical teams

with row-level security in Power BI.