

Healthcare Analytics Career Prep Guide

30-Day Learning Plan + Revenue Cycle Power BI Portfolio Project

Part 1: 30-Day Healthcare Analytics Learning Plan

Week 1 – Revenue Cycle Fundamentals

- End-to-end revenue cycle: Charge → Claim → Payment → Denial → Appeal → Write-off
- Gross vs Net Revenue
- Accounts Receivable (AR) and aging buckets
- Payer mix: Medicare, Medicaid, Commercial, Self-pay
- Goal: Explain how a claim becomes cash and where revenue leakage occurs

Week 2 – Healthcare KPIs & Analytics Thinking

- Denial rate, clean claim rate, days in AR
- Net collection rate and write-offs
- Revenue leakage identification
- Executive vs operational KPIs
- Goal: Identify which metrics signal revenue risk

Week 3 – BI in Healthcare

- Healthcare dashboard design principles
- Data latency and reconciliation challenges
- Star schema modeling for claims data
- Role-based dashboards (executive vs manager)
- Goal: Explain why metric definitions and reconciliation matter

Week 4 – Compliance & Interview Readiness

- HIPAA and PHI awareness
- Aggregated vs sensitive data
- Translating past experience into healthcare language
- Interview storytelling with healthcare KPIs
- Goal: Communicate analytics value safely and clearly

Part 2: Revenue Cycle Power BI Portfolio Project

Project Objective

- Identify revenue leakage and improve cash flow using revenue cycle analytics
- Demonstrate real-world healthcare BI skills

Dataset Design

- Claims table: claim ID, charge amount, dates, department
- Payments table: payment amounts, payment dates
- Denials table: denial reason, payer, denial flag
- Dimensions: Date, Payer, Department, Denial Reason

Data Model

- Star schema with claims as the fact table
- Clear relationships to payer, date, and department dimensions

Core KPIs

- Total charges and net revenue
- Denial rate (%)
- Days in AR
- Revenue leakage (\$)
- Payer mix (%)

Dashboard Pages

- Executive Summary: revenue trends, denial trends, revenue at risk
- Denials Analysis: denials by payer and reason
- AR & Cash Flow: AR aging buckets and days in AR trends

Documentation

- Business problem statement
- Metric definitions and assumptions
- Data model explanation
- Decisions supported by the dashboard