17th Current Issues Seminar on Health Care Insurance (CIHCI) Mumbai August 1st, 2025

Optimizing Healthcare Access and Cost: The Role of Preferred Provider Networks.

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Institute of Actuaries of India

Agenda

- Goals of a PPN
- Key Considerations in Establishing a PPN
- Narrow Network Strategy
- Global Trends in PPNs
- PPN Framework for India
- Challenges and Opportunities in India
- Q&A

Jaiwardhan Vij
Director – Actuarial Services @ Optum

Professional Information

Biography

- Born and brought up in NCR – Bahadurgarh, Haryana
- Masters Mathematics, IIT-Delhi
- AIA, IFOA - UK
- Worked for Milliman, Deloitte, Bharti AXA
- Lived in Delhi & Bangalore, settled in Hyderabad
- 5+ years at Optum Advisory
- Presented and Published white paper, articles in health, auto insurance, risk management and data sciences

Work Expertise

- 17+ years of experience in the health actuarial space area.
- Focusing on innovation and thought leadership in developing next generation model strategies in Actuarial & Underwriting
- Accomplishments include product pricing, monitoring and improving group health profitability, development of reimbursement comparison model, trend analysis and Medicare bids pricing.

Personal Information

Things I like to do outside of work

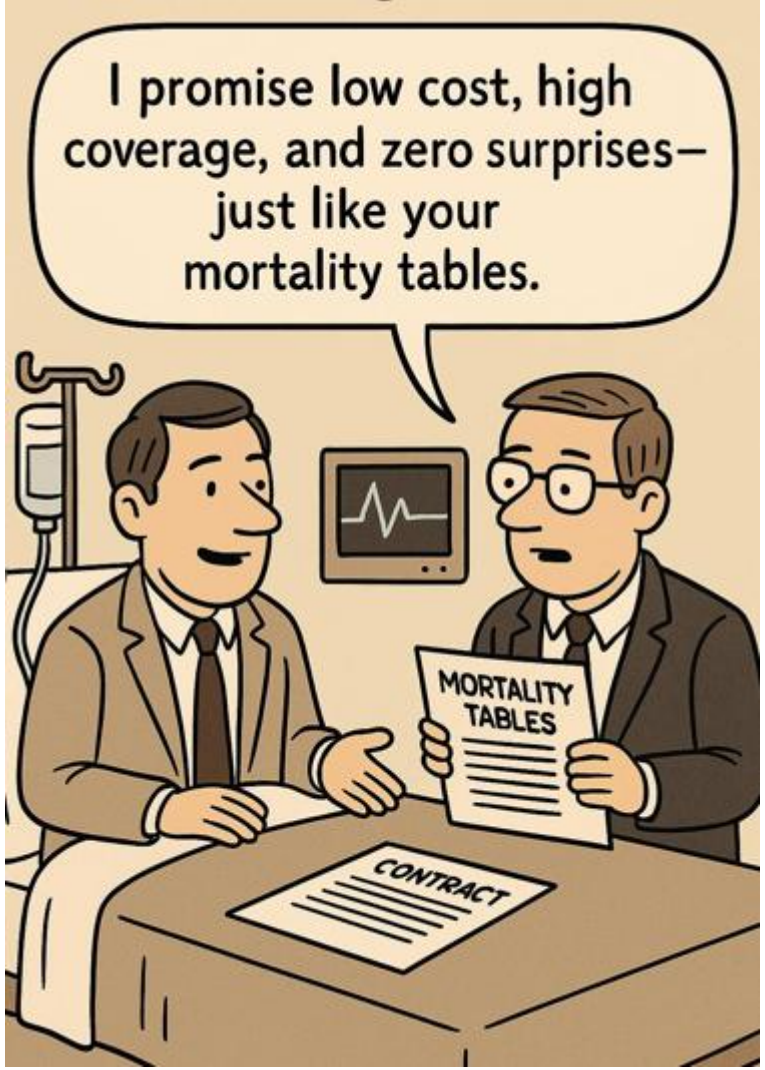
- Spending time with Family
- Staying Fit
- Serving Hot cup of Tea and Milk to Cancer Patients every Sunday morning

My Family

- Married to Megha
- Two Daughters - Siddhi & Avani

Three things you may not know about me

- IruMudiKattu : Sabrimal Visit
- When I was young, I wanted to be a palmist
- I run Mission Chai (Voluntary Service Organization) Hyderabad page



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Goals of a PPN

- Formed by HI, TPAs or HCP themselves
- Network of providers having common attributes:
    - Reimbursement Levels 💰
    - Accessibility Requirements 🚪
    - Quality Standards 📊
    - Patient Satisfaction 😊
- Goals, maximize:
    - Lower Cost of Healthcare 💸
    - Increase Quality of Healthcare 🏥
    - Increase Member Satisfaction 🌟

How to Stay on Track with Goals

- Measuring Cost/Util Performance
    - Cost per Episode of Care
    - Average Cost per Visit or Procedure
    - Total Cost of Care (TCOC) per Member per Month (PMPM)
    - Readmission Rates (30-day)
    - Emergency Room Utilization Rate
    - Avoidable Admission Rate
    - Length of Stay (LOS)
    - Imaging Utilization Rates (e.g., MRI, CT scans)
    - Specialist Referral Rates

How to Stay on Track with Goals

- Measuring Quality
  - HEDIS Scores (Healthcare Effectiveness Data and Information Set)
  - Preventive Care Compliance (e.g., cancer screenings, Immu.)
  - Chronic Disease Management Outcomes (e.g., HbA1c level)
  - Hospital-Acquired Conditions (HACs)
  - Surgical Complication Rates
  - Mortality, Morbidity, Disability,
  - Discomfort,
  - Sense of well-being

How to Stay on Track with Goals

- Measuring Member Satisfaction
  - Behavioral
    - Disenrollment rate / Intent to switch
    - Use of OON
  - Direct Measures
    - Average wait time for non urgent care / Dr. ofc
    - Avg wait time for Telephone access to care provider
    - % of members who have visited PCP in last 2/3 years
  - How member Feels about
    - Communication & Access to medical care
    - Ease of seeing Dr. Of choice
    - Continuity of care & Perceived quality
    - Whether member recommend plan to others

Key Considerations - establishing PPN

- Accessibility & Geographic Reach:
  - Urban vs. rural provider distribution
  - Travel time and density metrics

Metric	Description
Provider-to-population ratio	Number of PPN hospitals per 10,000 people
Average travel time	Time taken to reach nearest PPN facility
Coverage gaps	Areas with no PPN within a 30–60 min radius
Urban vs. rural mix	% of PPN hospitals in urban vs. rural areas

Key Considerations - establishing PPN

- Target Population Characteristics:
  - Age, morbidity, chronic disease prevalence
  - Socioeconomic and behavioral factors

Factor	Example Metrics
Age	% population over 60, under 15
Disease burden	Diabetes prevalence, NCD rates
Socioeconomic	Median income, literacy rate
Behavioral	Smoking rate, obesity prevalence

Key Considerations - establishing PPN

- Balancing Network Size with efficiency:
  - Narrow vs. Broad Networks
    - Narrow networks offer cost savings but may limit provider choice.
    - Broad networks provide more options but can be more expensive.
  - Efficiency Impact
    - The size of the network affects:
      - » Utilization – how often members use services.
      - » Member Satisfaction – how happy members are with access and care quality.

Category	Metric	Description	Example
Network Breadth	IP Facility Count	Total in-network hospitals offering IP services	Narrow: ≤ 100; Broad: ≥ 300
	Geographic IP Coverage	% members within 10 km of an IP facility	≥ 90%
	Specialty IP Access	% of key IP specialties available in-network	100%
Efficiency	IP Cost per Episode	Avg. cost per inpatient admission	↓ 10% in narrow networks
	IP Admission Rate	Admissions per 1,000 members/year	Benchmark vs. national avg.
	LOS (Length of Stay)	Avg. days per IP admission	≤ 4.5 days
Satisfaction	IP Access Satisfaction	% satisfied with hospital access	≥ 85%
	IP Grievance Rate	IP-related complaints per 1,000 members	≤ 1.5

Narrow Network Strategy

- Optimize Provider Network

  Limit the group of providers considered *in-network* to those who meet specific efficiency and quality benchmarks.

- Identify Efficient Care Delivery

  Analyze claims and volume data to determine which providers deliver care more efficiently (e.g., lower cost, better outcomes).

- Classify Provider Performance

  Segment providers into percentile groups based on performance metrics such as cost per episode, readmission rates, and patient satisfaction

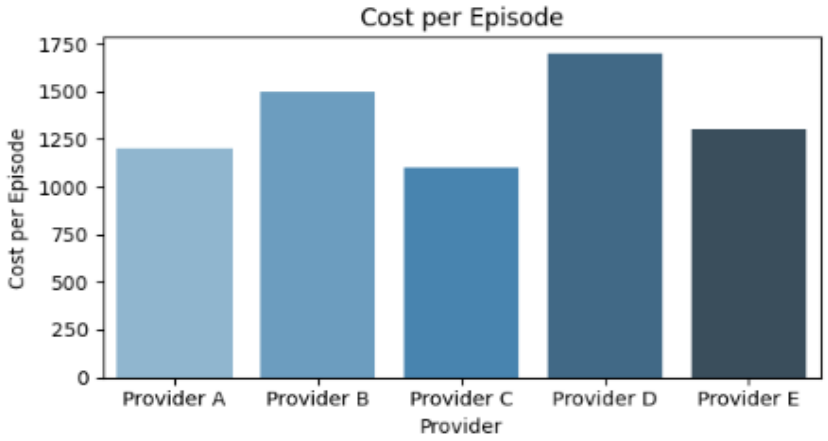
- Drive Value-Based Negotiations

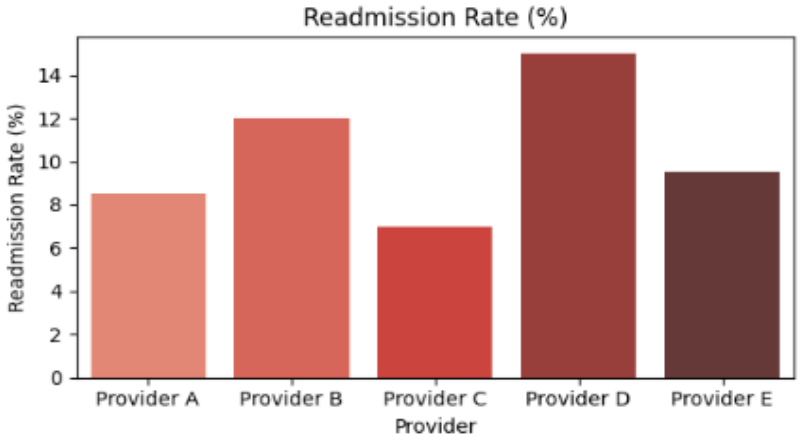
  Use performance insights to negotiate better rates with providers. Offer increased patient volume in exchange for discounted pricing or improved service levels.

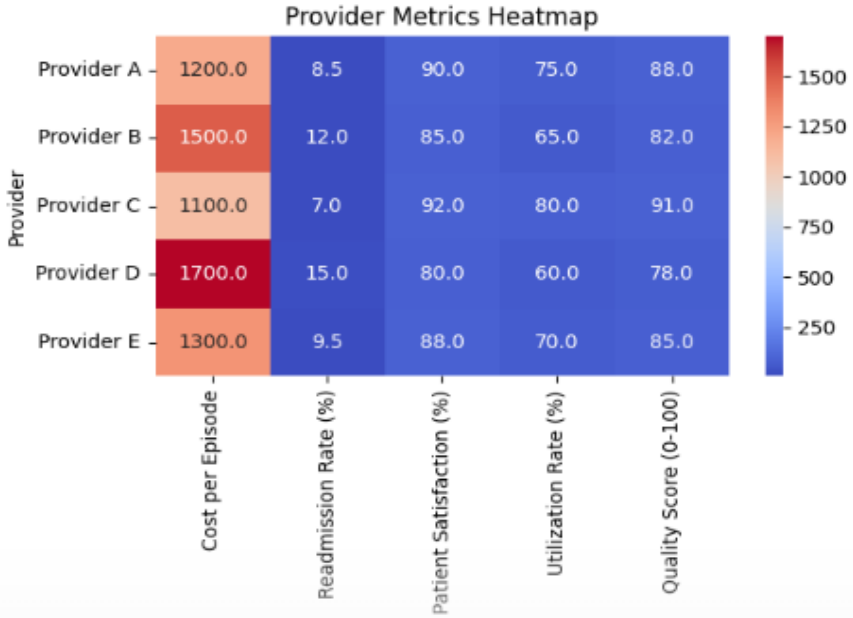
Optimize Provider Network

Action	What to Measure	Tools/Data Sources
Define Network Scope	Provider type, specialty, geography	Claims data, PPN master list
Collect Performance Data	Cost per episode, LOS, ER%, Readm, etc.	Claims Data
Apply Scoring Model	Weighted scores across 4 dimensions	Scoring logic (Efficiency 30%, etc.)
Rank & Segment Providers	High, medium, low performers	Score thresholds (e.g., ≥85 = Tier 1)
Optimize Contracts	Volume shift, rate renegotiation	Score-based negotiation strategy
Monitor & Refresh	Quarterly updates, trend tracking	Automated dashboards, Claim data refresh

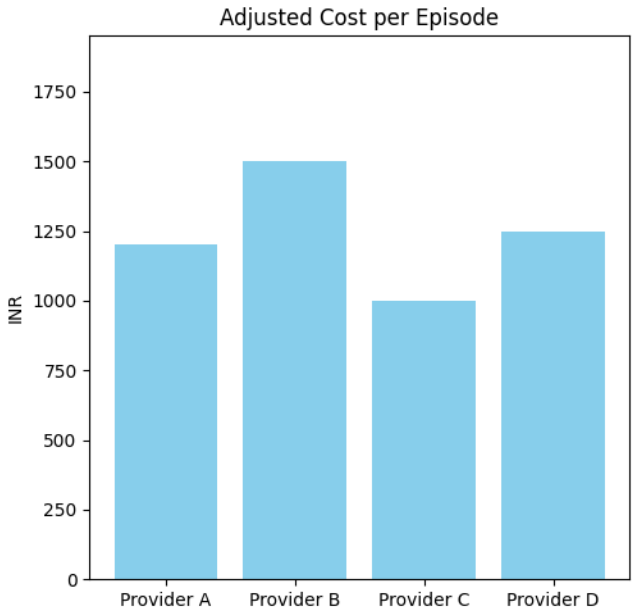
Provider Performance - Example

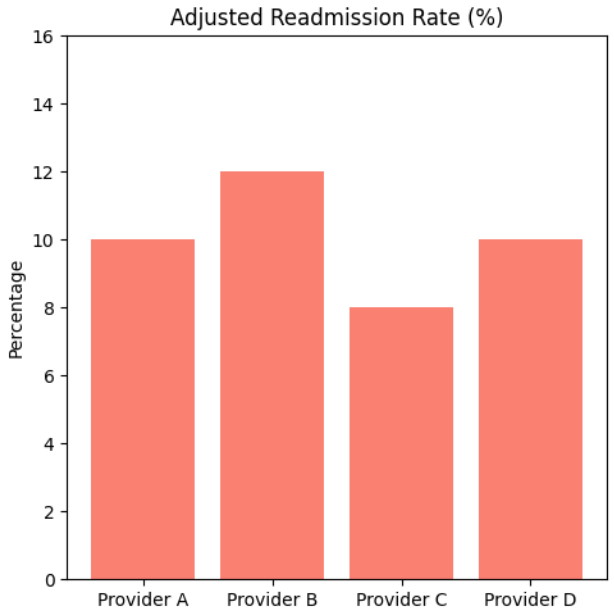






Risk Adjusted – Provider D





Risk Adjustment

For each provider's patient population, gather:

Age,
gender
Comorbidities (e.g., diabetes, hypertension)
Socioeconomic status
Prior utilization history

Metric	Adjustment Formula
Cost per Episode	Adjusted Cost = Observed Cost / Average Risk Score
Readmission Rate (%)	Adjusted Rate = Observed Rate / Expected Rate (based on risk profile)

Value Based Negotiations

- Performance Based Incentives
- Tiered Reimbursement Models
- Volume-for-Discount Trade-Off
- Data Transparency
* Risk-Sharing Arrangements

Payers: Lower costs, better predictability, improved member satisfaction

Providers: More patients, performance bonuses, data-driven insights

Patients: Higher quality care, fewer unnecessary procedures, lower OOP costs

Global Trends in PPN

United States:

- Rise of Accountable Care Organizations (ACOs)
- Tiered and narrow networks

United Kingdom:

- NHS partnerships with private providers
- Emphasis on integrated care systems

Emerging Markets:

- Growth of managed care in Latin America & SEA
- Digital health platforms expanding access

Strategic Framework

Core Objectives

- Cost Containment: Through negotiated tariffs and bundled payments.
- Quality Assurance: Via credentialing and performance monitoring.
- Improved Access: Especially in underserved geographies
- Member Satisfaction: Timely, Equitable and Integrated services

Design Considerations

- Accessibility & Geographic Reach: Urban-rural distribution, travel time, and provider density.
- Target Population Characteristics: Age, morbidity, socioeconomic and behavioral factors.
- Multitier Network to provide choices, but cost and complexity
- Narrow Network: Lower premium selected providers
- Performance Metrics: Cost, quality, and member satisfaction indicators

Strategic Framework

Implementation Roadmap

- Keep Physicians in loop: Gatekeeper approach
- Empanelment Process: Evaluate hospitals based on infrastructure, quality, and compliance.
- Wider network for Tier II and beyond: Ensuring adequate coverage
- Technology Integration: Enable real-time claims adjudication and provider performance dashboards, Interoperability
- Regulatory Compliance: Align with IRDAI norms and ensure transparency in pricing and service delivery

Challenges & Opportunities in India

Regulatory Landscape

- **GIPSA** pioneered the PPN model in 2010 to standardize treatment costs and streamline cashless services.
- Private insurers have since adopted and customized this model, but **lack of uniform regulatory standards remains a challenge**

Infrastructure Gaps

- Disparities in hospital **quality and availability** across regions complicate network design.
- **Digital health** infrastructure is improving but still fragmented.

Actuarial Complexity

- Pricing models must account for regional cost variations, utilization patterns, and risk stratification.
- Predictive analytics and machine learning can enhance provider selection and fraud detection

Strategic Recommendations

For Insurers:

- Invest in provider analytics and contracting capabilities
- Build actuarial models to simulate network impact

For Policymakers:

- Encourage data sharing and interoperability
- Support value-based care pilots

For Actuaries:

- Develop India-specific network adequacy benchmarks
- Collaborate on health economic evaluations

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Thank you for the Opportunity!

How to Stay on Track with Goals

- Measuring Cost/Util Performance

Metric	Definition	Purpose
Cost per Episode of Care	Total cost incurred for a complete treatment cycle (e.g., surgery + rehab)	Identifies providers delivering care at lower cost for similar outcomes
Total Cost of Care (PMPM)	Aggregated monthly cost per member across all services	Highlights providers managing population health efficiently
Readmission Rate (30-day)	% of patients readmitted within 30 days of discharge	Indicates quality of discharge planning and post-acute care
Emergency Room Utilization Rate	ER visits per 1,000 members	Flags over-reliance on acute care vs. primary care
Avoidable Admission Rate	Admissions for conditions manageable in outpatient settings	Measures effectiveness of preventive and primary care
Length of Stay (LOS)	Average inpatient days per admission	Assesses efficiency of inpatient care and discharge readiness
Imaging Utilization Rate	Frequency of high-cost imaging (e.g., MRI, CT)	Detects potential overuse of diagnostics
Specialist Referral Rate	% of primary care visits resulting in specialist referrals	Evaluates appropriateness and efficiency of care pathways

Optimize Provider Network

- Define Benchmarks

  Establish clear, measurable criteria for inclusion (e.g., cost per episode, readmission rates, patient satisfaction).

- Evaluate Provider Performance
  - Use risk-adjusted metrics to fairly assess provider efficiency and quality.
  - Identify top-performing providers based on data-driven insights.
- Narrow the Network
  - Retain only those providers who meet or exceed benchmarks.
  - Exclude or renegotiate with underperforming providers.
- Monitor Continuously
  - Regularly update performance data to ensure ongoing compliance.
  - Adjust network composition as needed based on new insights.

How to Stay on Track with Goals

- Measuring Member Satisfaction

Category	Metric	Definition
Behavioral	Disenrollment Rate / Intent to Switch	Percentage of members who disenroll or express intent to switch plans
	Use of Out-of-Network (OON)	Frequency or percentage of members using out-of-network services
Direct Measure	Average Wait Time for Telephone Access to Care Provider	Average time to reach a care provider via phone
	Communication & Access to Medical Care	Member perception of communication quality and ease of accessing care
	Ease of Seeing Doctor of Choice	Member-reported ease of accessing preferred doctor
	Continuity of Care & Perceived Quality	Member perception of care continuity and overall quality
	Likelihood to Recommend Plan to Others	Percentage of members likely to recommend the plan

Balancing the Healthcare Value Equation

- The Four Dimensions:
  - Cost: Capitation, bundled payments, negotiated discounts
  - Utilization: Referral management, gatekeeping
  - Access: Telemedicine, tiered networks
  - Quality: Outcome-based incentives, provider scorecards
- Actuarial Tools:
  - Predictive modeling
  - Cost-benefit analysis
  - Simulation of network scenarios