# CLAIM PROCESSING, REIMBURSEMENT INTELLIGENCE & HEALTHCARE SYSTEMS SPECIALIST

# TAPABRATA BISWAS

## PROFESSIONAL OVERVIEW

Tapabrata Biswas is a highly experienced healthcare reimbursement and claims-processing specialist with a deep operational and technical understanding of how payer systems evaluate, adjudicate, and reimburse medical claims. With a career foundation rooted in one of the largest health insurance organizations in the world and extended expertise in algorithm design, automation, and healthcare data intelligence, he brings a rare dual perspective—both payer-side and provider-side—to modern revenue integrity solutions.

His work bridges operational claims expertise, insurance policy logic, and intelligent system design, enabling healthcare organizations to identify underpayments, correct denials, and recover revenue with accuracy and confidence. Tapabrata's contribution has been central to the development of advanced reimbursement intelligence platforms, including the core logic behind ClinicalSpeed.


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## EDUCATIONAL QUALIFICATION

2002

**CERTIFICATE IN COMPUTING (CIC)**

Indira Gandhi National Open University

2006

**BACHELOR OF SCIENCE**

Eastern Institute for Integrated Learning in Management

## CORE AREAS OF EXPERTISE

- Medical Claims Processing & Adjudication
- Insurance Payer Logic & Benefit Structures
- Underpayment Identification & Denial Analysis
- EDI 835 / EDI 837 Transaction Analysis
- Insurance Contract Coding & Policy Logic Modeling
- Reimbursement Intelligence System Design
- Biomedical Informatics & Algorithm Development
- Diagnostic Data Processing & Superbill Generation
- Billing Workflow Analysis & Optimization

## PROFESSIONAL EXPERIENCE

### UNITED HEALTH GROUP – ENTERPRISE CLAIMS PROCESSING & ADJUDICATION OPERATIONS

- **Organization:** UnitedHealth Group
- **Role:** Senior Executive – Claims Operations

## PROJECT OVERVIEW

This project involved large-scale medical claims processing within a complex payer environment, covering multiple claim lifecycles and operational segments. The work provided direct exposure to the internal systems, decision trees, and policy logic that govern how insurance claims are evaluated, approved, denied, or adjusted.

## SCOPE OF WORK

Tapabrata was responsible for handling claims across the full reimbursement lifecycle, including new adjudications, post-adjudication reviews, denial re-evaluations, and complex financial adjustments. His role required a detailed understanding of benefit structures, contractual language, and payer operational logic.

## KEY RESPONSIBILITIES

- Processed newly submitted medical claims across multiple service categories and payer workflows
- Conducted detailed reviews of closed claims to assess accuracy of adjudication decisions
- Evaluated denied claims to determine whether denials aligned with policy rules and contractual terms
- Managed adjustment cases involving both overpayments and underpayments
- Interpreted payer benefit structures, coverage limitations, and reimbursement methodologies
- Worked within payer adjudication systems, applying policy logic to real-world claim scenarios

## OPERATIONAL INSIGHT GAINED

Through this work, Tapabrata developed a deep, practical understanding of how claims are truly decided within payer systems—beyond surface-level policy documentation. He identified systemic patterns that lead to incorrect denials, underpayments, and misapplied benefit logic, building foundational expertise that later informed reimbursement intelligence and automation initiatives.

## PROJECT IMPACT

- Strengthened accuracy in claim adjudication and adjustment workflows
- Improved identification of payer-side processing inconsistencies
- Built domain knowledge critical for later underpayment detection systems

# PECEPORTAL – DIAGNOSTIC DATA PROCESSING & AUTOMATED SUPERBILL GENERATION

- **Platform:** PECEPORTAL
- **Role:** Biomedical Informatics Director

## PROJECT OVERVIEW

This project focused on designing and implementing automated logic to convert TM-Flow diagnostic test data into accurate, billing-ready Superbills. The objective was to streamline the transition from diagnostic testing to billing documentation while reducing manual effort and documentation errors.

## SCOPE OF WORK

Tapabrata designed and implemented algorithmic workflows to interpret TM-Flow diagnostic data and translate test results into structured Superbill outputs. The scope included ensuring that diagnostic records uploaded by physicians could be reliably processed into standardized billing documentation suitable for downstream billing workflows.

This work emphasized accuracy, consistency, and automation in converting diagnostic data into reimbursement -ready formats.

## KEY RESPONSIBILITIES

- Designed algorithms to interpret TM-Flow diagnostic test data
- Developed logic to convert diagnostic outputs into structured Superbill formats
- Enabled direct upload of TM-Flow diagnostic records by physicians
- Ensured Superbill outputs aligned with billing documentation workflows
- Reduced manual data entry and interpretation in Superbill preparation
- Validated Superbill accuracy against diagnostic input data

## STRATEGIC VALUE

This project replaced manual Superbill preparation with a structured, automated process, improving consistency and reducing documentation-related billing errors. By directly linking diagnostic outputs to billing documentation, the system improved reliability and efficiency in provider billing workflows.

## PROJECT IMPACT

- Reduced manual Superbill creation and associated errors
- Streamlined diagnostic-to-billing workflows for healthcare providers
- Supported scalable processing of diagnostic records
- Improved billing accuracy and documentation consistency
- Increased efficiency in preparing billing-ready documentation

# CLINICAL SPEED - UNDERPAYMENT DETECTION & REIMBURSEMENT INTELLIGENCE ENGINE

- **Platform:** ClinicalSpeed
- **Role:** Biomedical Informatics Director

## PROJECT OVERVIEW

This project focused on developing the reimbursement intelligence layer within ClinicalSpeed responsible for detecting underpaid claims through transaction-level analysis. The objective was to systematically identify reimbursement discrepancies by evaluating payment data against expected outcomes derived from payer rules and contractual logic already encoded within the platform.

## SCOPE OF WORK

Tapabrata contributed to the design and refinement of system logic that processes claim transaction data to identify variances between paid and expected reimbursement amounts. The scope centered on interpreting remittance and claim data to surface underpayments and quantify financial discrepancies at scale.

This work emphasized transaction accuracy, analytical consistency, and alignment with observed payer reimbursement behavior.

## KEY RESPONSIBILITIES

- Designed core logic for identifying underpayments based on expected versus
- Supported interpretation of EDI 837 claim data for transaction-level comparison
- Ensured detection logic aligned with real-world payer adjudication patterns
- Developed analytical workflows for processing EDI 835 remittance files
- Built calculation logic to determine precise underpaid amounts at the claim level
- Validated underpayment findings against historical transaction data

## TECHNICAL & ANALYTICAL DEPTH

This work leveraged Tapabrata's payer-side claims processing experience to ensure that reimbursement intelligence logic reflected how payments are actually calculated and issued by payers. By grounding detection algorithms in real transaction behavior, the system avoided reliance on abstract or theoretical reimbursement assumptions.

## PROJECT IMPACT

- Enabled automated identification of underpaid claims through transaction analysis
- Reduced dependence on manual audits and subjective claim review processes
- Improved accuracy and consistency of reimbursement discrepancy detection
- Increased transparency into payer payment behavior at the transaction level

# CLINICAL SPEED – INSURANCE CONTRACT CODING, POLICY LOGIC MODELING & UNDERPAYMENTS DISCOVERY

- **Platform:** ClinicalSpeed
- **Role:** Biomedical Informatics Director

## PROJECT OVERVIEW

This project focused on converting complex insurance payer contracts and reimbursement policies into structured, machine-readable logic that could be executed at scale by reimbursement intelligence systems. The objective was to eliminate ambiguity in contract interpretation and enable precise, automated identification of underpayments and incorrect claim adjudications.

## SCOPE OF WORK

Tapabrata led the analytical and informatics-driven effort to deconstruct payer contracts, fee schedules, and reimbursement policies and translate them into executable system logic. The work required close alignment between contractual language, payer adjudication behavior, and real-world transaction data to ensure the system could accurately evaluate claims across varied payer scenarios.

This scope extended beyond static contract interpretation to modeling how payer systems apply contractual terms in practice, allowing reimbursement logic to reflect operational reality rather than theoretical policy language.

## KEY RESPONSIBILITIES

- Performed detailed analysis of insurance contracts, reimbursement schedules, and payer policy documentation
- Deconstructed complex contractual language into discrete, rule-based components suitable for software execution
- Converted reimbursement terms, payment methodologies, and rate structures into structured system logic
- Modeled payer-specific policy variations, including differences in application of contract terms across claim scenarios
- Integrated contractual logic with claim-level transaction analysis using EDI 835 and EDI 837 data
- Aligned modeled contract logic with observed payer adjudication patterns to ensure real-world accuracy
- Tested and validated logic outputs against historical remittance data to confirm accuracy of underpayment detection
- Refined system rules based on discrepancies between expected and actual payer behavior

## STRATEGIC VALUE

This work established a contract-driven intelligence layer that allowed reimbursement analysis to be based on enforceable contractual obligations rather than assumptions or generalized benchmarks. By encoding contracts into executable logic, the platform could consistently evaluate claims at scale while maintaining alignment with payer operational practices.

The approach reduced reliance on manual interpretation, improved audit defensibility, and created a repeatable framework for applying complex payer agreements across large claim datasets.

## PROJECT IMPACT

- Significantly improved accuracy in identifying underpayments and reimbursement discrepancies
- Strengthened compliance and audit defensibility through logic directly traceable to contract terms
- Reduced dependency on manual audits and subjective claim reviews
- Enabled consistent, repeatable contract-based claim evaluation across payers
- Provided healthcare providers clear visibility into how payer contracts were applied at the claim level
- Enabled scalable, automated reimbursement intelligence capable of detecting even minor payment variances

## DECISION DOC – CLINICAL INTAKE INTELLIGENCE & MEDICAL NECESSITY MODELING

- **Platform:** DecisionDoc
- **Role:** Biomedical Informatics Director

### PROJECT OVERVIEW

This project focused on structuring advanced patient intake and medical necessity intelligence to support accurate disease state discovery, compliant documentation, and downstream reimbursement workflows. The platform was designed to translate intake-derived clinical data into structured outputs aligned with established medical coding frameworks.

### SCOPE OF WORK

Tapabrata contributed biomedical informatics expertise to structure patient intake data, clinical indicators, and diagnostic findings into standardized, code-aligned formats based on CPT and ICD valuation regulations. The scope emphasized ensuring that early-stage intake data could reliably support encounter documentation, billing preparation, and payer-facing review processes.

This work reinforced the connection between initial patient intake and its impact on documentation quality and reimbursement accuracy.

### KEY RESPONSIBILITIES

- Supported the design of advanced patient intake logic for disease state discovery
- Modeled medical necessity indicators based on objective intake and diagnostic data
- Supported generation of reports suitable for billing and payer submission
- Structured intake-derived clinical data to align with CPT and ICD coding frameworks
- Ensured intake outputs supported accurate encounter documentation
- Maintained consistency between intake intelligence and reimbursement-sensitive workflows

### STRATEGIC VALUE

This project ensured that patient intake functioned as a structured, intelligence-driven process rather than unorganized data capture. By aligning intake outputs with standardized coding frameworks, the platform helped reduce documentation gaps that commonly affect billing accuracy and reimbursement outcomes.

### PROJECT IMPACT

- Improved structure and clarity of patient intake data
- Reduced risk of reimbursement issues caused by incomplete or inconsistent intake records
- Supported more consistent, reimbursement-aware clinical processes
- Strengthened alignment between clinical findings and documentation requirements
- Enhanced reliability of encounter documentation for billing workflows

## MYEVAL.AI – AI-DRIVEN SYMPTOM EVALUATION & CODE-ALIGNED MEDICAL INSIGHTS

- **Platform:** MyEval.ai
- **Role:** Biomedical Informatics Director

### PROJECT OVERVIEW

This project focused on developing an AI-driven health evaluation platform designed to interpret user-reported symptoms and disease indicators and translate them into structured, actionable medical insights aligned with standardized medical coding systems. The objective was to bridge the gap between complex medical data and understandable, professionally aligned health evaluations.

## SCOPE OF WORK

Tapabrata contributed biomedical informatics and reimbursement-aware logic to ensure that symptom evaluations and disease-state assessments were structured using standardized medical coding frameworks, including CPT and ICD. The scope emphasized transforming unstructured symptom inputs into consistent, code-aligned outputs suitable for clinical interpretation, documentation, and downstream healthcare workflows.

This work focused on ensuring that AI-generated insights remained aligned with professional medical standards rather than generic or non-clinical health interpretations.

## KEY RESPONSIBILITIES

- Supported the design of AI-driven symptom evaluation logic
- Ensured evaluation outputs aligned with CPT and ICD coding frameworks
- Supported generation of professional-grade reports suitable for clinical and healthcare use
- Structured symptom and disease-state data into standardized, code-aligned medical formats
- Helped translate complex health data into actionable, structured medical insights
- Ensured consistency between AI evaluation outputs and medical documentation standards

## STRATEGIC VALUE

This project ensured that AI-based health evaluations were grounded in structured medical logic rather than generalized health content. By aligning symptom interpretation with standardized coding systems, the platform helped ensure clarity, consistency, and professional relevance in health assessments.

## PROJECT IMPACT

- Improved accuracy and structure of AI-generated health evaluations
- Enhanced clarity and usability of health insights for healthcare decision-making
- Supported scalable delivery of structured, code-aligned medical evaluations
- Strengthened alignment between symptom analysis and medical coding standards
- Reduced ambiguity commonly associated with generic symptom-based tools

## PROFESSIONAL CONTRIBUTION & PHILOSOPHY

Tapabrata Biswas combines payer-side claims processing experience with biomedical informatics and system design to build reimbursement intelligence that reflects real-world payer behavior. His work focuses on translating payer rules, contracts, and transaction data into structured system logic that enables accurate claim evaluation and reliable underpayment identification.

By grounding reimbursement systems in how claims are actually adjudicated—rather than how they are theoretically described—he helps ensure consistency, accuracy, and audit defensibility across reimbursement workflows. His contributions support scalable, data-driven platforms that reduce ambiguity in payer interactions and give healthcare organizations clearer insight into reimbursement outcomes.