

CASE STUDY: PAYMENT INTEGRITY

Fraud (Intentional Deception)

1. **Billing for Services Not Rendered** – Charging for procedures or treatments that were never performed
2. **Upcoding** – Billing for a more expensive procedure than what was actually performed
3. **Unbundling** – Separating services that should be billed together to increase reimbursement
4. **Falsifying Diagnoses or Patient Records** – Changing a diagnosis to justify unnecessary treatments
5. **Kickbacks and Referral Fraud** – Accepting or offering payments for patient referrals
6. **Phantom Billing** – Charging for medical tests or services that were never conducted
7. **Impersonation and Identity Theft** – Using someone else's insurance information to receive care

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Waste (Unnecessary Costs)

1. **Unnecessary Procedures and Tests** – Conducting excessive lab tests, imaging, or treatments not medically necessary
2. **Overuse of Emergency Rooms / ER Billing** – Unnecessary ER visits when primary care would suffice
3. **Extended Hospital Stays** – Keeping patients admitted longer than necessary
4. **Brand-Name Drug Prescriptions Instead of Generics** – Overprescribing expensive medications when cheaper alternatives exist
5. **Failure to Coordinate Care** – Redundant tests or treatments due to lack of communication between providers

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Abuse (Excessive or Improper Practices)

1. **Improper Coding Practices** – Repeatedly miscoding claims to maximize reimbursement
2. **Over-billing for Time-Based Services** – Charging for longer consultation times than what was actually spent
3. **Charging for Non-Covered Services as Covered** – Submitting claims for cosmetic procedures under medically necessary codes
4. **Duplicate Billing** – Charging for the same service multiple times

Errors (Mistakes in Claims Processing)

1. **Typos and Data Entry Errors** – Incorrect patient information, diagnosis codes, or provider details
2. **Incorrect Billing Codes** – Using outdated or incorrect CPT/ICD codes
3. **Incomplete or Missing Documentation** – Lack of supporting medical records for claims
4. **Mismatched Patient and Provider Information** – Submitting claims under the wrong provider or patient

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Pre-pay

- Rules Engines: Automatic rules check claims before payment — e.g., flagging duplicate claims, medically unlikely procedures, or mismatched diagnosis/procedure codes
- Edits and Validation: Software can be deployed at the client site to apply edits (like CCI edits, LCD/NCD rules)* to ensure coding and billing compliance
- Prepayment Review Teams: If a claim is flagged by an analytic, it's pulled for manual review before the claim is sent back to the payer. This typically requires a medical record request and is done by a clinician
- Line editing or manual review can be done in tandem or deployed separately. This is achieved by deploying software within the payer systems or the payer holding the claim, sending it to an audit system where it is processed while it waits for a response to continue processing the claim
- Payers have traditionally avoided non-deterministic assessment / flagging of claims automatically. However, using models to flag a claim for manual review is becoming more acceptable
- The key advantage to pre-pay is that you are intercepting spend as opposed to trying to reclaim it

*Correct Coding Initiative Edits, Local Coverage Determination / National Coverage Determination

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Post-pay

- Retrospective Data Mining: Large datasets of paid claims are analyzed to find patterns
- Post-pay is typically employed to generate initial savings and then used to train models for use in pre-pay detection
- Also, post-pay can be used to detect more macro FWAE issues looking for outliers
 - Machine learning models (or even just statistical methods) flag aggregate patterns
 - This can show issues with providers, facilities, geographies or patients whose patterns stand out against peers
- Examples:
 - Providers with unusually high billing for specific procedures
 - Patients seeing multiple providers for the same issue
 - Geographic billing anomalies indicating emerging scams
 - Facilities billing for impossible services (e.g., removing the same limb twice)

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Methodologies

- Data acquisition
 - Deployed components at client site (e.g., automatic claims editing)
 - Batches of claim data sent for processing off-site via flat file or EDI (for pre or post-pay)
 - API calls out from payer adjudication system in real-time (pre-pay)
 - EMR to support review (this is often done somewhat manually as regulations require a formal request)
- Predictive Modeling and Machine Learning
 - Supervised Learning Models: Using past known fraud cases to train models to predict likelihood of fraud.
 - Anomaly Detection: Algorithms that identify patterns that don't fit the norm, even without labeled fraud data.
 - Natural Language Processing (NLP): Reviewing EMRs, clinical notes, if available, to match up with claim information.

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Opportunities

- Real-time adjudication
 - This is not common as many payers struggle to integrate via API
 - Build out a connector scheme to the more common adjudication platforms (e.g., Facets)
 - Build out a team that can be deployed on-site to implement, refine the connector for payer clients
 - Connector calls out to API either externally hosted or deployed into payer infra
- FL Training
 - Used in lieu of sending massive amounts of HIPAA protected claims data (or granting access to resources external to payer)
 - Ability to use multiple payer clients' data to inform FWAE detection
 - Train real-time adjudication models against claims history
 - Used in tandem with manual review or real-time audit schemes

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Considerations

- Pre-pay vs. Post-pay
- Claim vs. Claim line vs. Editing
- EMR Requests / Integrations
- Manual vs. Automated Reviews
- Timing (Prompt pay rules considerations)
- Integration types: Batch, API, deployed apps/components
- Claim stream: Adjudication system vs. X12 (837)
- Analytic model: Algos vs. Models/ML/FL
- Data availability / Data cleansing / Valid values