Techniques for Detecting and Controlling Fraud & Abuse

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Fraud and Abuse, or “Manipulating the Rules”

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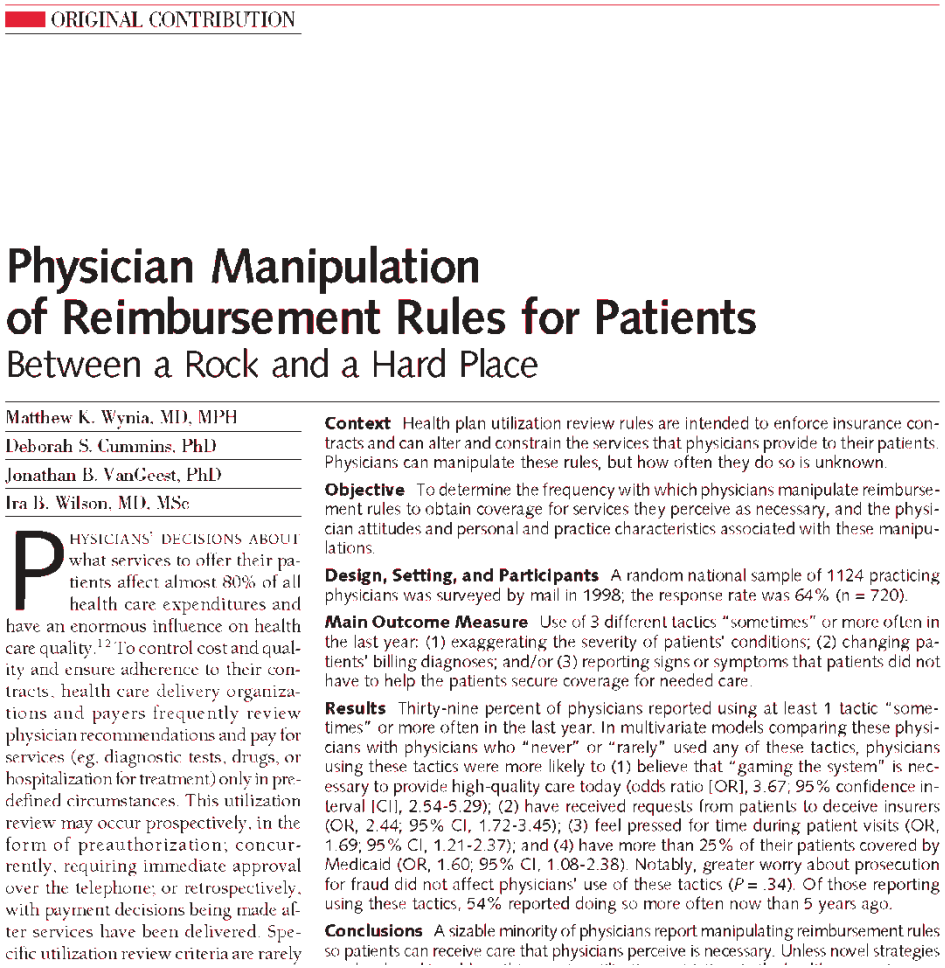
JAMA. 2000;283:1881-1884



ORIGINAL CONTRIBUTION

Physician Manipulation of Reimbursement Rules for Patients

Between a Rock and a Hard Place

Matthew K. Wynia, MD, MPH
Deborah S. Cummins, PhD
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PHYSICIANS' DECISIONS ABOUT what services to offer their patients affect almost 80% of all health care expenditures and have an enormous influence on health care quality.[1,2] To control cost and quality and ensure adherence to their contracts, health care delivery organizations and payers frequently review physician recommendations and pay for services (eg, diagnostic tests, drugs, or hospitalization for treatment) only in predefined circumstances. This utilization review may occur prospectively, in the form of preauthorization; concurrently, requiring immediate approval over the telephone; or retrospectively, with payment decisions being made after services have been delivered. Specific utilization review criteria are rarely

Context Health plan utilization review rules are intended to enforce insurance contracts and can alter and constrain the services that physicians provide to their patients. Physicians can manipulate these rules, but how often they do so is unknown.

Objective To determine the frequency with which physicians manipulate reimbursement rules to obtain coverage for services they perceive as necessary, and the physician attitudes and personal and practice characteristics associated with these manipulations.

Design, Setting, and Participants A random national sample of 1124 practicing physicians was surveyed by mail in 1998; the response rate was 64% (n = 720).

Main Outcome Measure Use of 3 different tactics "sometimes" or more often in the last year: (1) exaggerating the severity of patients' conditions; (2) changing patients' billing diagnoses; and/or (3) reporting signs or symptoms that patients did not have to help the patients secure coverage for needed care.

Results Thirty-nine percent of physicians reported using at least 1 tactic "sometimes" or more often in the last year. In multivariate models comparing these physicians with physicians who "never" or "rarely" used any of these tactics, physicians using these tactics were more likely to (1) believe that "gaming the system" is necessary to provide high-quality care today (odds ratio [OR], 3.67; 95% confidence interval [CI], 2.54-5.29); (2) have received requests from patients to deceive insurers (OR, 2.44; 95% CI, 1.72-3.45); (3) feel pressed for time during patient visits (OR, 1.69; 95% CI, 1.21-2.37); and (4) have more than 25% of their patients covered by Medicaid (OR, 1.60; 95% CI, 1.08-2.38). Notably, greater worry about prosecution for fraud did not affect physicians' use of these tactics ($P = .34$). Of those reporting using these tactics, 54% reported doing so more often now than 5 years ago.

Conclusions A sizable minority of physicians report manipulating reimbursement rules so patients can receive care that physicians perceive is necessary. Unless novel strategies

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The Evolution of Controls & Detection Methods

	1st Gen	2nd Gen	3rd Gen	Next Gen
Approach	**Reactive**	**Retrospective Data Mining**	**Prospective Flagging**	**Comprehensive Detection**
Characteristics	▪Based on tips, referrals and random audits ▪Staffed by ex-law enforcement	▪Looks for unusual payment trends ▪Validates tips and referrals	▪Prospective management of claims from known suspicious providers	Prospective Identification using ▪Provider Centric Approach ▪Claim Centric Approach ▪Predictive Modeling Approach
Benefits	▪ Sentinel effect ▪ Compliance with regulatory mandates ▪ Typically negative or neutral ROI	▪Basis for recovery cases ▪Increased number and volume of cases ▪Positive ROI ▪Difficult to scale	▪4-5 times more effective than retrospective recovery	▪Applied to the entire claims stream for maximum impact ▪Professional claims intervention for up to 16% payer profitability improvement

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Orientation to Fraud Operations

Key Component	Role in Payment Accuracy
Analytics and Identification	▪Identification of overpayment as a result of fraud, waste and abuse primarily using data analytic techniques ▪Uses paid claim data to craft prepayment detection methodologies (Provider centric, claim centric, Predictive)
Prospective	▪Occasionally, so ▪Prepayment investigation of suspicious claim transactions ▪Uses review of medical records to recommend payment or denial of claims to id as stand alone service, mainly supports contingency based prospective programs payers ▪Generally uses a contingency based pricing methodology to drive revenue
Retrospective	▪Pursues for recovery inappropriately paid claims due to issues of fraud, waste and abuse on a contingency pricing model ▪To be cost efficient, recoveries generally consist of several claims linked together by a unique provider ▪Large recovery frequency is generally spiky due to the long recovery cycle
Regulatory Affairs	▪Generally used to address state by state regulatory requirements. Focus usually limited to fraud.

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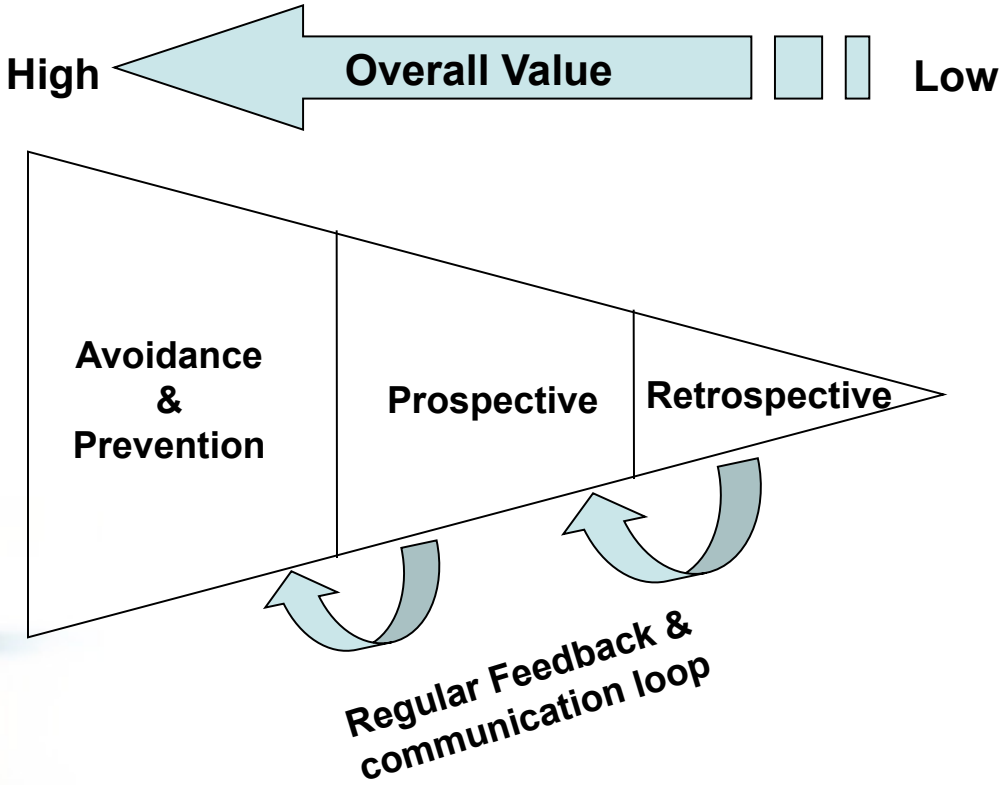
Payment Intervention Review



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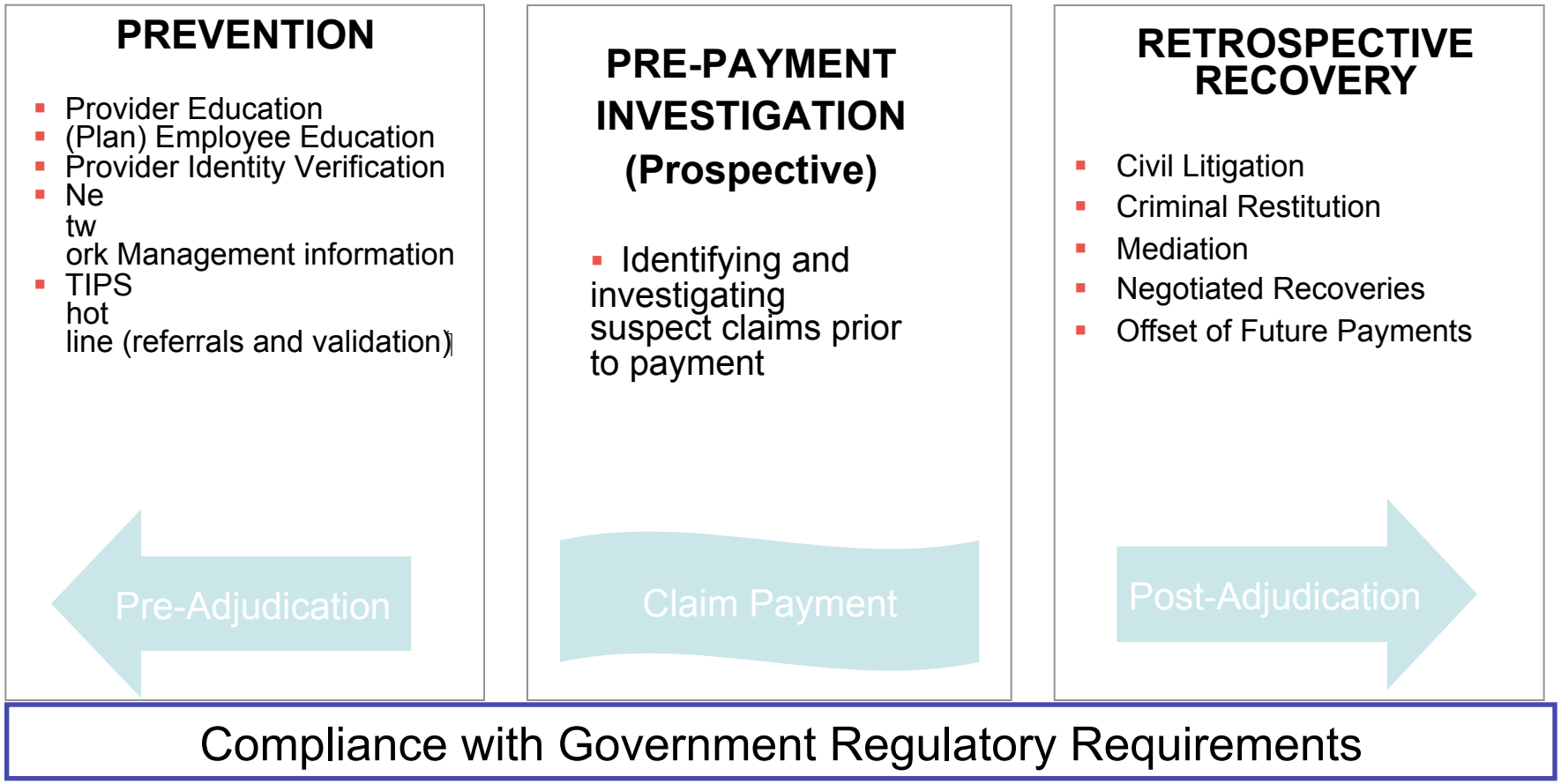
Integrated Fraud & Abuse



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Integrated Fraud & Abuse Detection Strategy

PROVIDER-CENTRIC

Based on peer-to-peer comparison of historical data, individual providers are selected for prepayment investigation

CLAIM–CENTRIC

Applied to all claims as submitted, Dynamic rules used to spot individual claims linked to suspect behavior

PREDICTIVE MODELING

Advanced learning models that score individual claims before payment and reflect mathematical probability of fraud

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Fraud and Abuse Approach

Fraud & Abuse Detection Approaches

- Provider Centric
  - Peer Analysis
  - Utilization
- Claim Centric
  - Rules
  - Complex edits
- Member Centric
  - Link analysis

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Types of Variables

Provider: Peer clusters based on applied specialties. Count, average, compare to peers on multiple variables including:

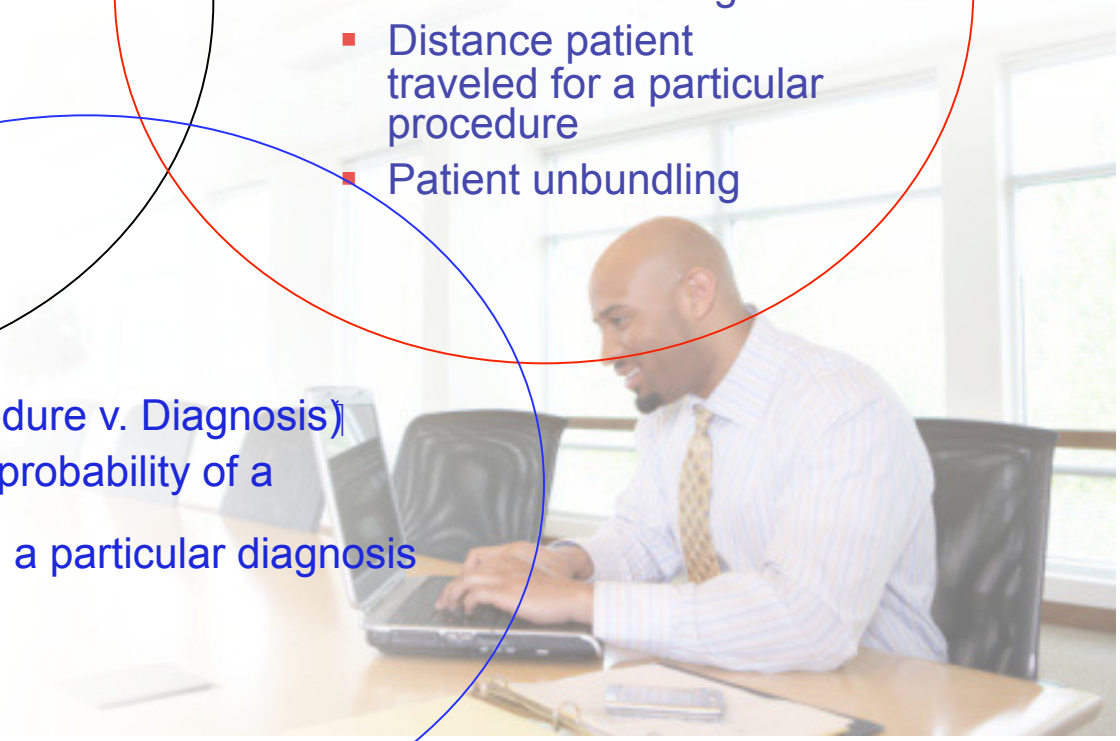
- Modifier usage
- Unbundling
- Upcoding

Patient: Peer clusters based on age, location and gender. Count, average and compare peers based on multiple variables including:

- Distance patient traveled for a particular procedure
- Patient unbundling

Claim (Procedure v. Diagnosis)

- Score the probability of a proce
  dure given a particular diagnosis



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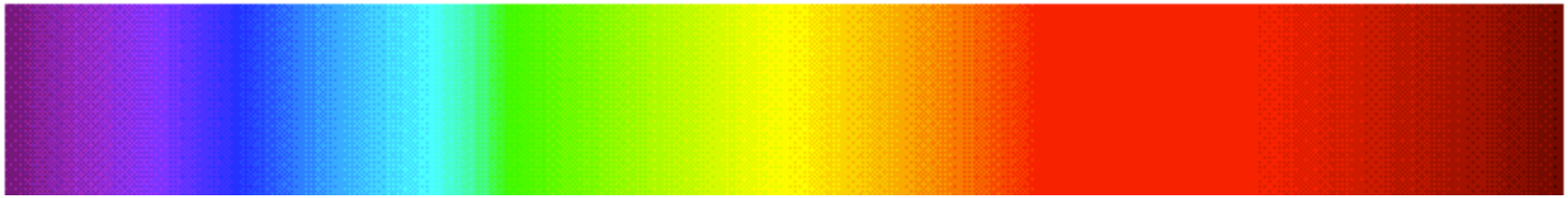
Spectrum of medical billing



Under-utilization | Optimal utilization | Overutilization | Medically unnecessary | Abusive billing practices | Fraud

All components of this spectrum benefit from analysis using these tools and techniques

- Outliers
- Peer groups
- Trend
- Acceleration
- Network analysis
- Distance
- Upcoding
- Modifiers
- Multiple service categories
- Common practices
- Disease vs provider behaviors
- Game theory and behaviors
- Contract issues
- Regulatory issues

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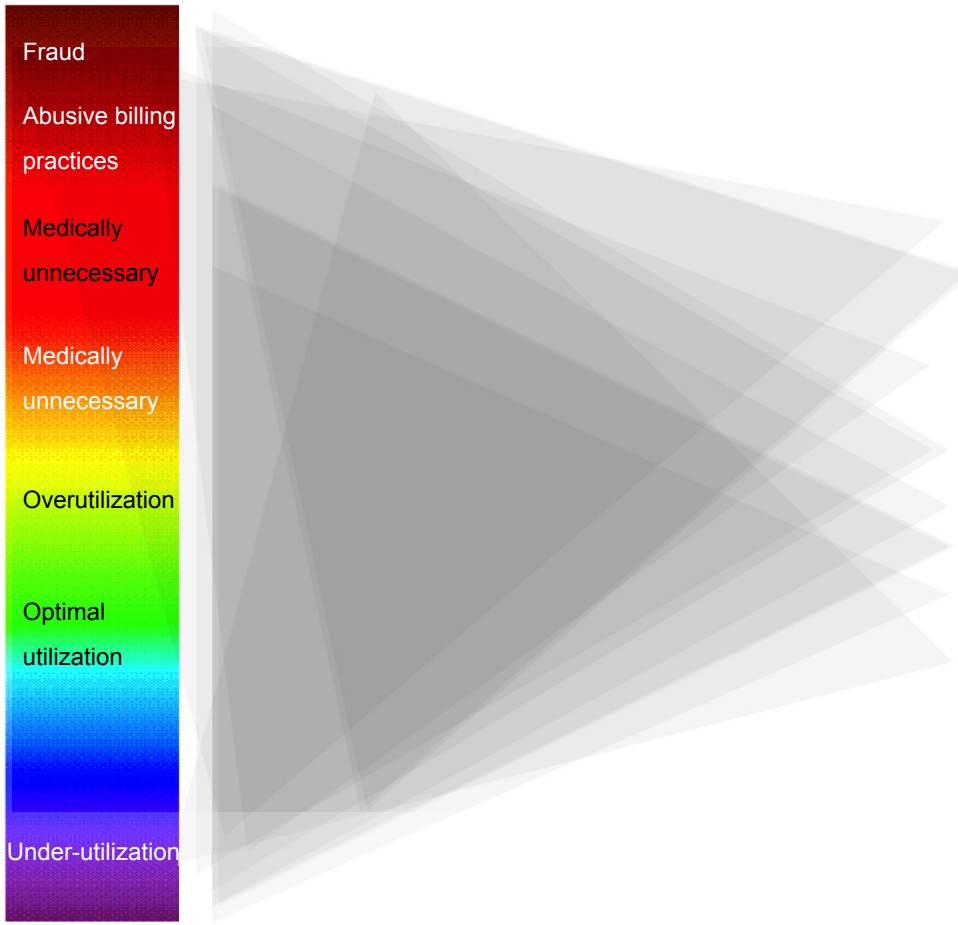
All dimensions of utilization within all claim types



- Professional services
- Injectables/infusions
- Home health
- DME
- Retail pharmacy
- Inpatient
- Outpatient

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Fraud detection: development sources

Business-based "tips" as the initiating event:

- Network
  - Financially-based finding
  - Claim-based aberrancy
- Medical management
  - Utilization aberrancy
  - Quality / outcome aberrancy
- Member sources
- Provider community
  - Ex-partners or ex-spouses
  - Competitors
  - Consultant / SMEs
- Industry sources
  - NHCAA
  - Regulatory agencies
    - Federal
    - State
  - Professional networking

Idea Evolution

- Refinement of a current detection mechanism
- Enhance or adjust scope re product, customer, provider, service, or claim type
- Increase selectivity for higher accuracy
  - Dollar, provider, or claim-based criteria
- Increase sensitivity for higher yield
  - Dollar, provider, or claim-based criteria
- Decrease sensitivity to reduce false-positive rate

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Types of Fraud and Abuse Detection

- It is estimated that somewhere between 3% and 7% of healthcare claims are inaccurately paid in a continuum that ranges from mistakes to intentional fraud.
  - Mistakes
  - Unbundling
  - Upcoding
  - Masking
  - Duplication of Services
  - Services not Rendered
  - Inappropriate Solicitation
  - Inappropriate billing by mid-level practitioners
  - Unnecessary service
  - Nonexistent Healthcare Providers and Fraud Networks

The Challenge of Provider Targeting

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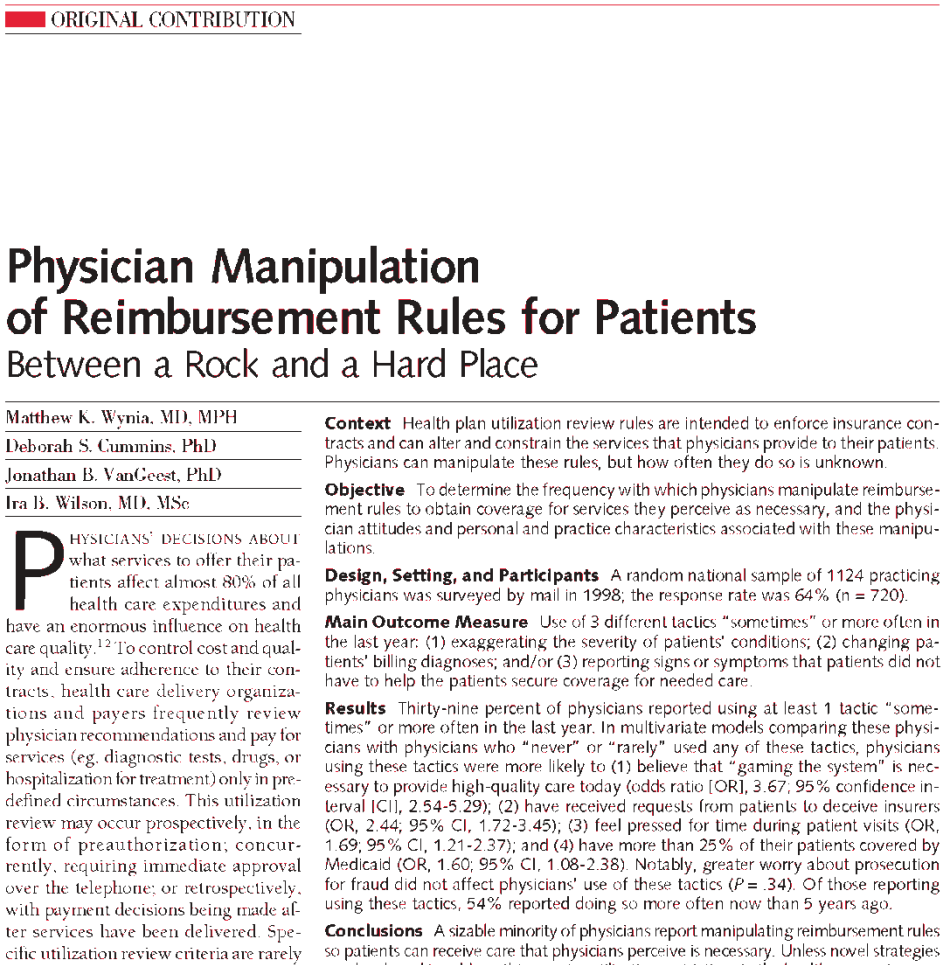
So why don't PI units target or flag 54% of providers for claim review?



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The Challenge of Provider Targeting

- We cannot target 54% of providers for claim review
  - Aside from the most egregious providers, the majority of submitted claims are “normal” and should be paid
  - An Ingenix study found incremental, actionable, suspect claims that represent 0.19% of the claim volume that impacted 0.71% of the paid dollars (~ $321M / yr).
  - However these claims span over 3,000 providers in any given month.
- Beyond provider-centric cases (i.e. worst of the worst) incremental savings exist in the population of providers that are only “periodically” responsible for fraud, waste and abuse
  - The only way to effectively address these claims is with a highly accurate and selective detection strategy that exhibits minimal false positives.

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Provider Centric Patterns
Example: Modifier Utilization

Background

- Modifiers used to describe services, split procedures for payment purposes, provide additional information on a claim
- Focus on Modifiers that are used to increase payment on a claim

Variables

- Peer group modifier utilization
- Provider specific utilization
- Variance metrics utilized to flag outliers for further review

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Provider Centric Patterns
Example: Unlikely Procedures

Background

- Fraudulent activity is often found via review of unusual procedure code s submitted by a provider (or phantom for that matter)
- Such providers may be billing for experimental or unproven procedures, or misrepresenting the procedures performed in order to obtain additional reimbursement

Variables

- Peer group utilization of procedure code
- Provider utilization of procedure code
- Variance metrics (including z scores) to measure aberrancy

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Provider Centric Patterns
Example: Upcoding

Background

- Upcoding occurs when:
  - **there are tw o or more options for the same procedure that vary depending on**
    - **The severity of the patient's condition,**
    - **The amount or size of the work to be done, or**
    - **The number of steps to the procedure,**
- Where a prov ider bills a higher level when a lower level of service was received.

Variables

- Dozens of upcoding code sets are reviewed in detection
- Peer group coding distributions
- Provider coding distribution
- Estimated overpayment
- Degree of aberrancy (Z score)

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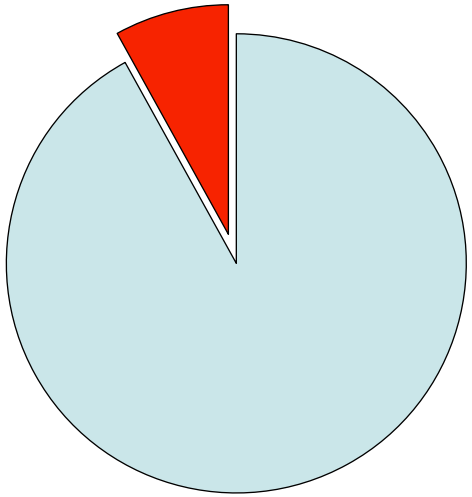
Provider Centric Patterns
Example: Follow-up Visit Upcoding

- Claims are not chosen at random for pre-payment review. Each claim is selected based on specific characteristics, including the physician's billing patterns as compared to peers who bill for similar services.

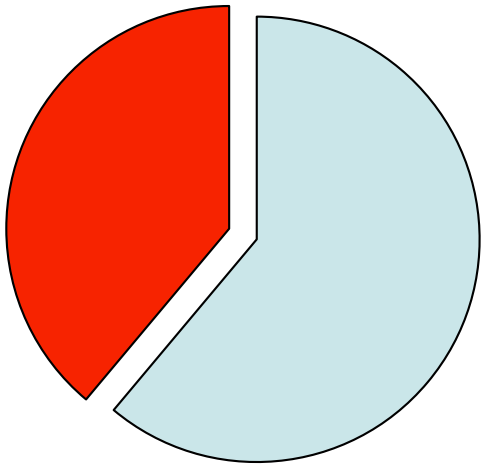
- Why was this particular therapist selected for chart review of a follow-up visit > 60 minutes?

Peer group of therapists: 8% usage of longest visit code



N=11,101

This therapist uses the longest visit code for 61% of sessions



N= 41

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Member Centric Patterns
Example: Procedure Distance

Background

- Typically patients will travel relati v ely small distances to have routine procedures done.
- Greater variability possi ble for rural areas or for more specialized procedures

Variables

- Distance a patient travels for a particular procedure
- Aver ag e distance for that procedure with patient's peer group
- Variance metrics (Comparison to patient peer group)

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Member Centric Patterns
Example: Member Link Analysis

Background

- Members identified in a specific fraud scheme were receiving kickbacks from fraudulent providers
  - A significant number of providers (and phantoms) were part of the same scheme
- Additional providers were found to be participating in the same (or similar) scheme by following members to other providers
  - Other providers were sharing same patients

Variables

- Providers known to be participating in scheme
- Members seeing those providers
- Shared patient volume

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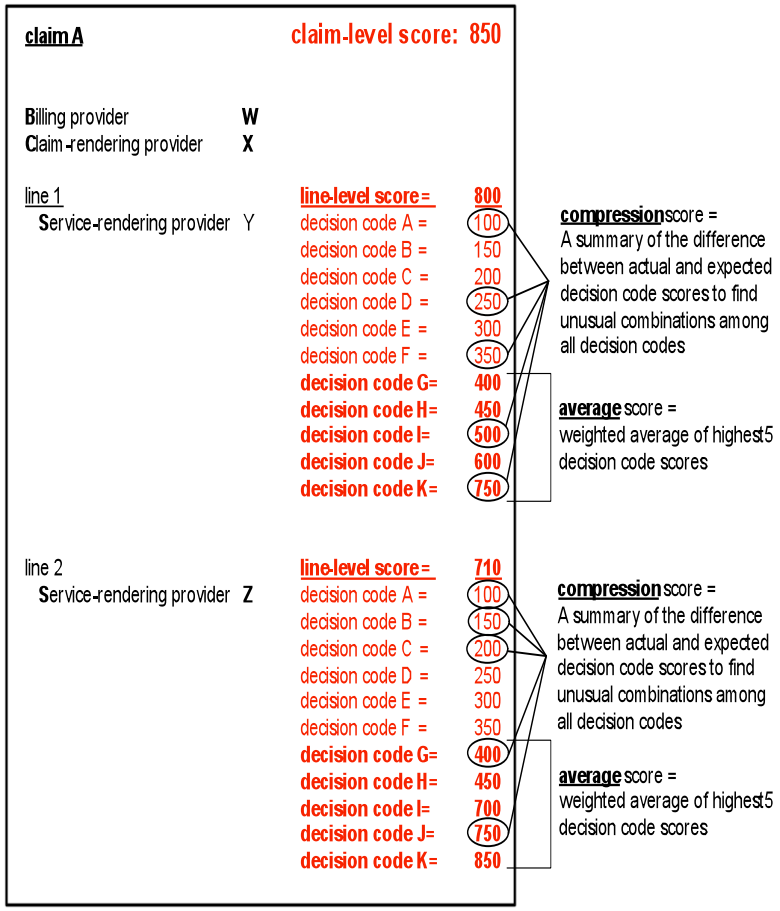
Claim Scoring



- Claims are scored at the claim level and by claim line
- Each claim line score is a complex computation involving both a compression score and an average score
- The overall score is very effective at identifying suspect claims

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Outlier Detection

- Peer Group Comparisons - rollup tables of known risk factors. Healthcare providers are then compared to the group norms.

- Scoring Engines - Principle Components Analysis (PCA) can be used to find the common sources of variation and then an individual healthcare provider can be compared against this feature vector.

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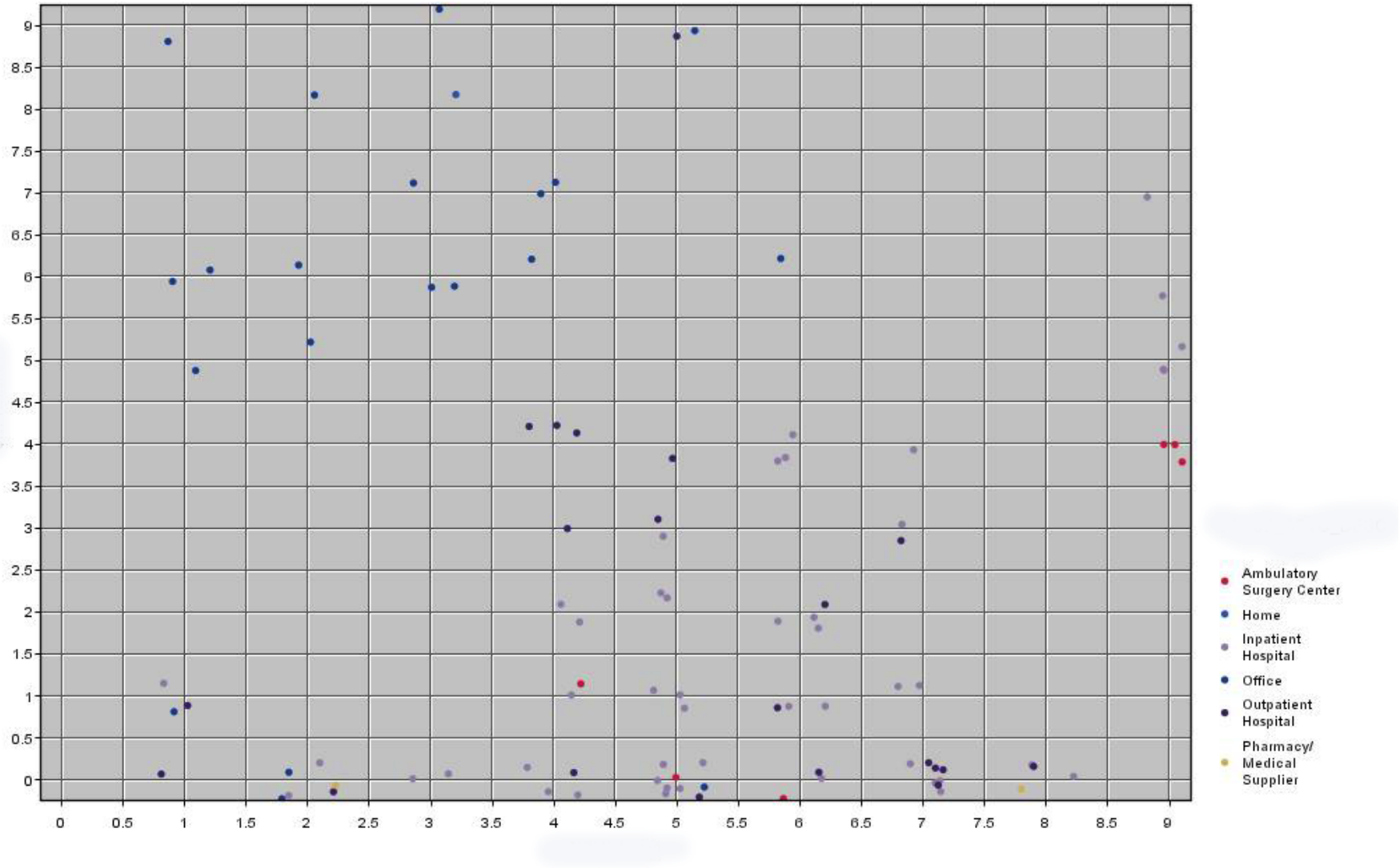
Cluster Analysis: A Case Study



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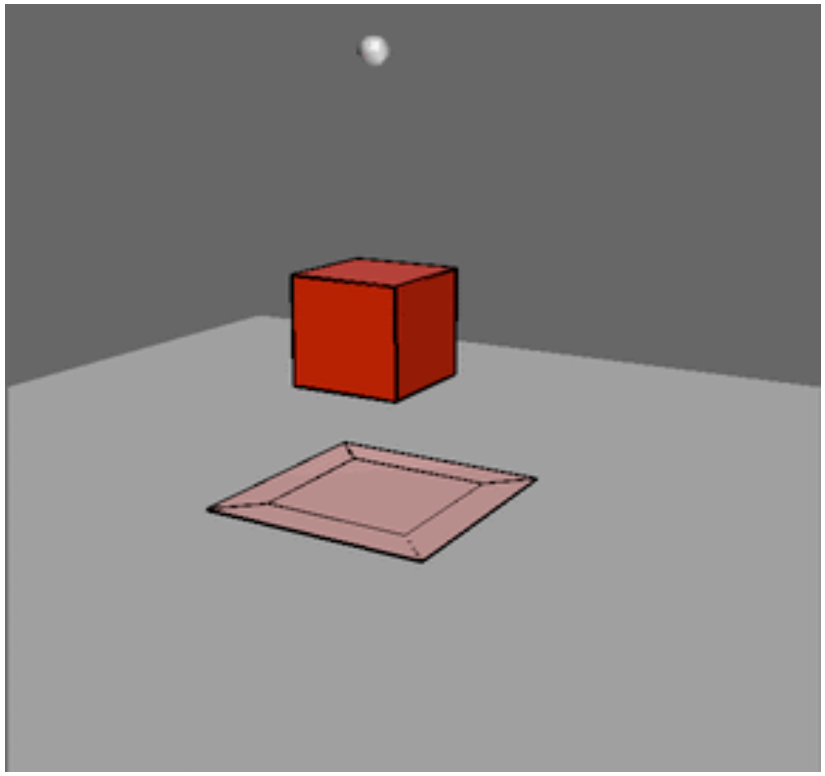
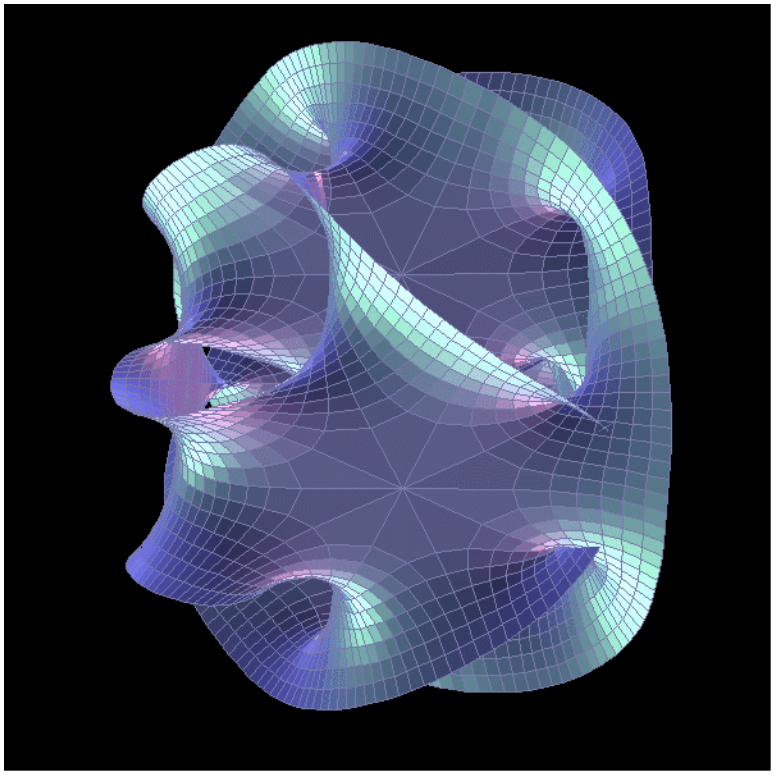
Multiple, multiple dimensions





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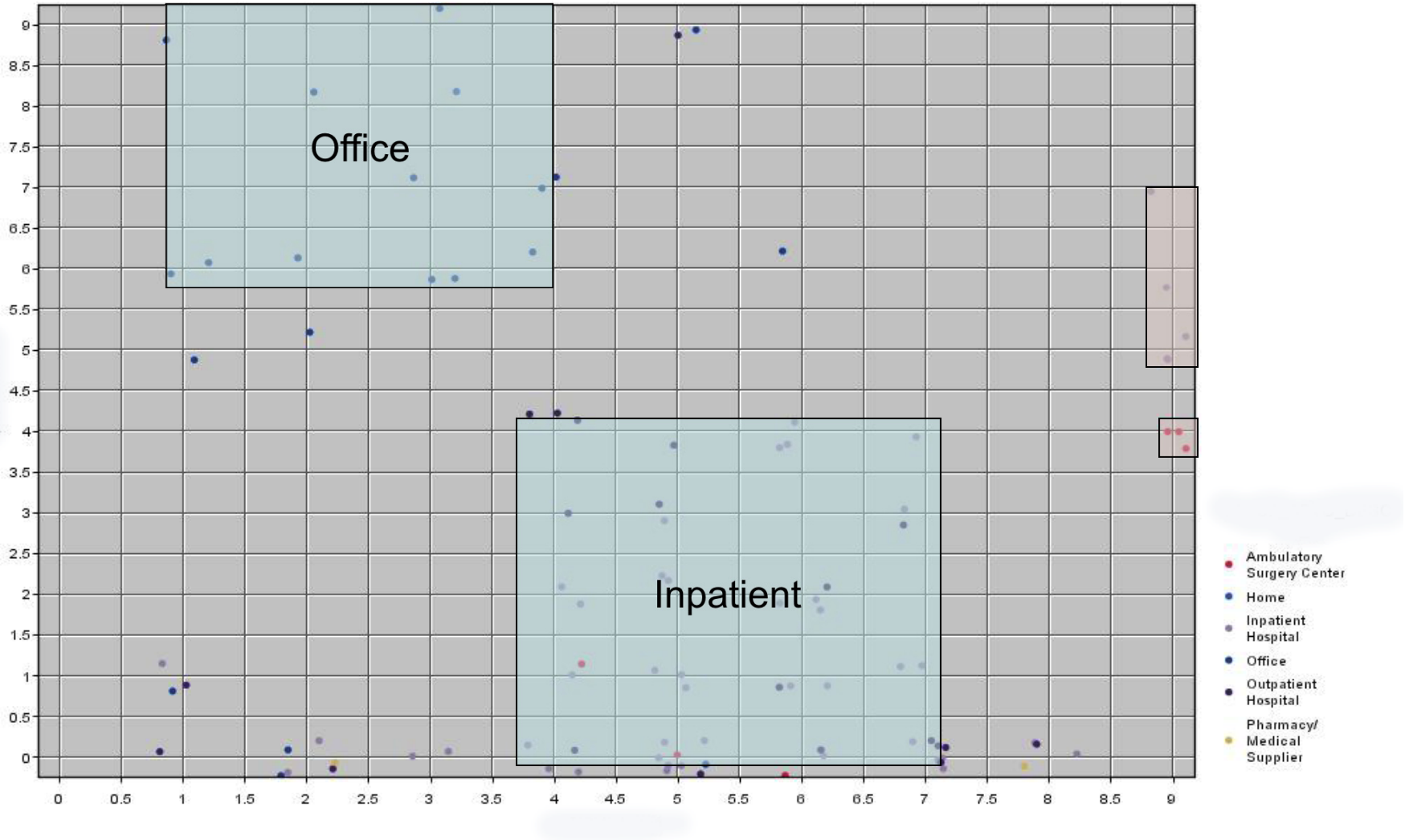

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Questions?

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