

# ***Transaction-Based Business Intelligence***

*Leveraging HIPAA to Gain Value from Transaction Data*

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**Director of Healthcare Solutions**

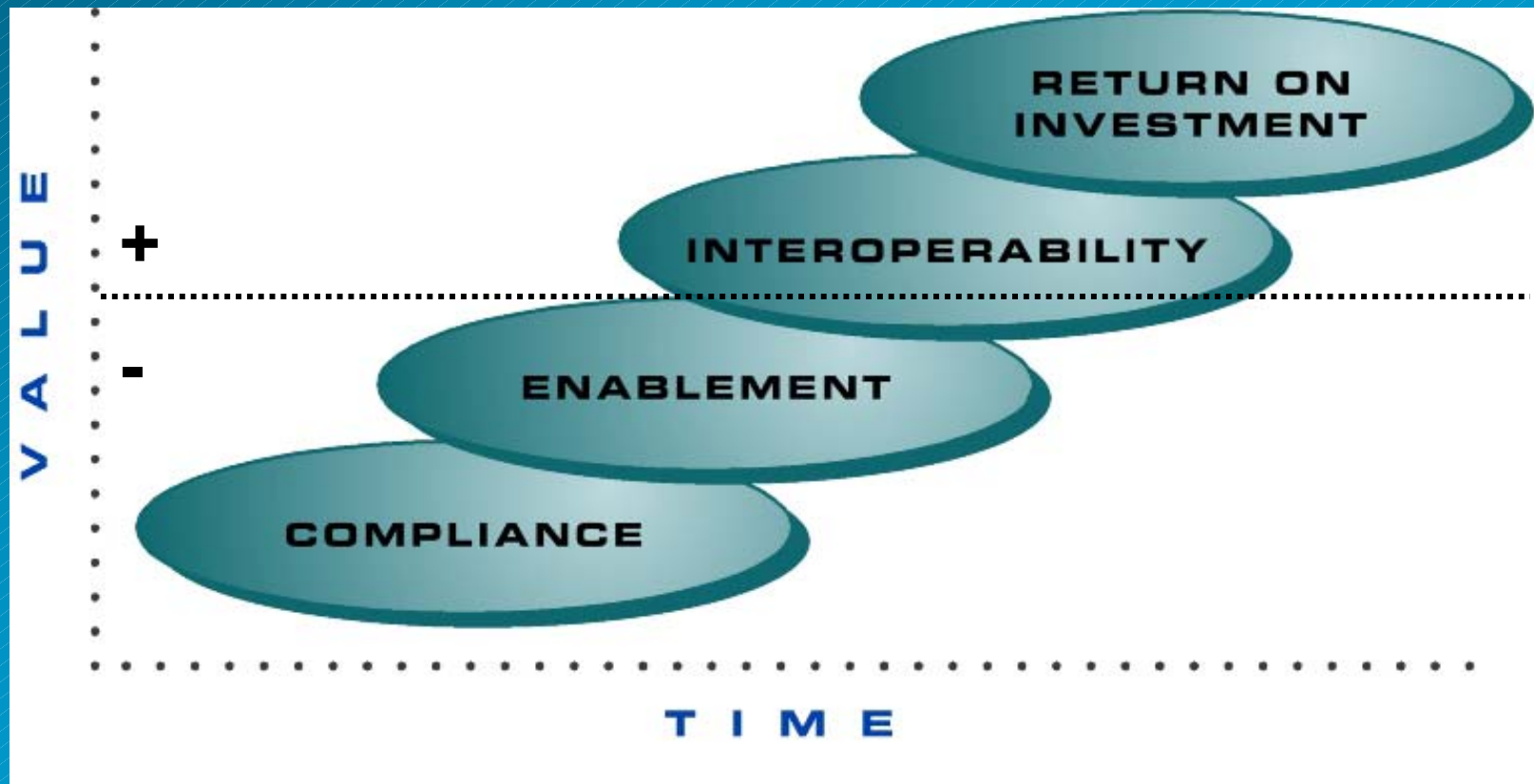
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# HIPAA and 'Administrative Simplification'

If you liked 'Tax Simplification',  
you're going to love  
'Administrative Simplification'!

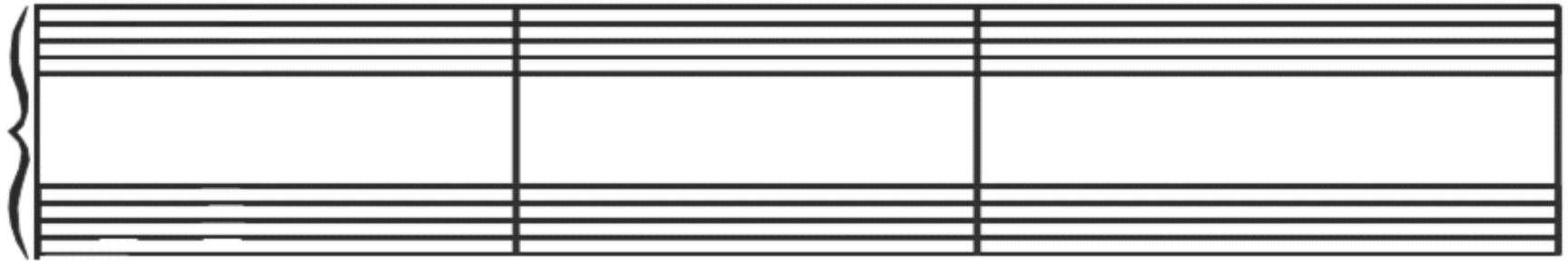


# Gaining Value Overtime



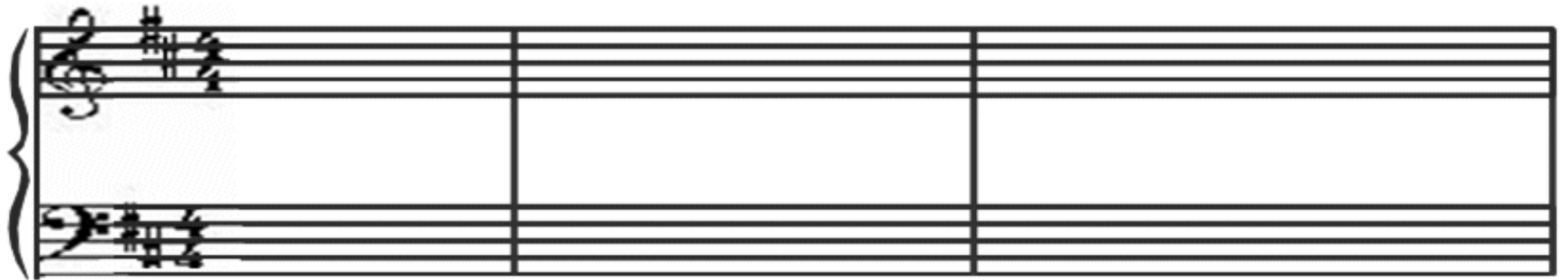
# The Ideal Standard

One of the world's first, and best, interoperability standards



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## AIR ON A G STRING

J. S. Bach

The image displays a musical score for the piece "Air on a G String" by J.S. Bach. The score is written for Violin I and Violoncello. The Violin I part is in the treble clef, and the Violoncello part is in the bass clef. The key signature is one sharp (F#), and the time signature is 4/4. The tempo is marked *mp* (moderato). The score includes various tempo markings above the notes: *J=106*, *J=30*, *J=33*, *J=37*, *J=33*, *J=34*, *J=34*, *J=32*, *J=31*, and *J=20*. The Violoncello part features a wavy line indicating a tremolo effect. The Violin I part includes a wavy line indicating a tremolo effect.

# The Ideal Standard

## A LITTLE MORE LOVE

Words and Music by  
VINCE GILL

Moderate country rock  $\text{♩} = 116$

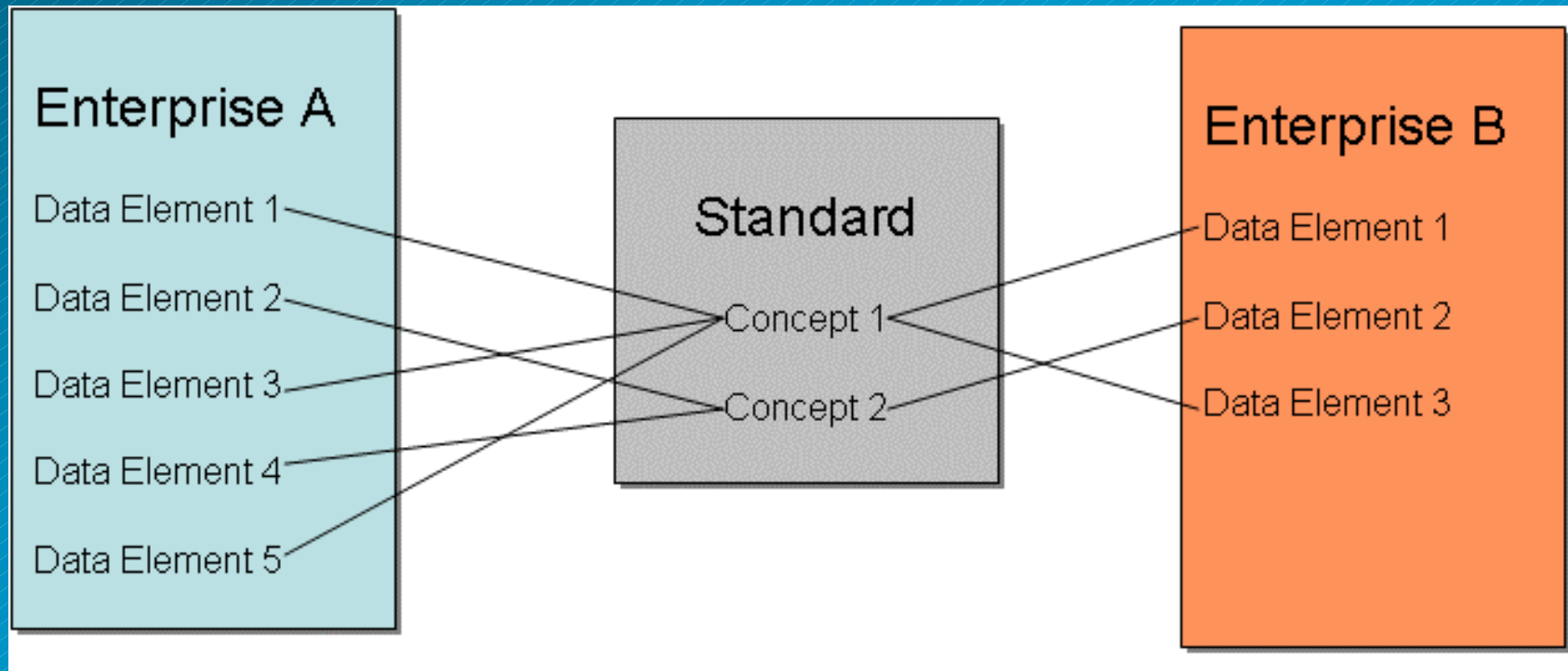
The musical score is written for guitar and piano. The key signature is two sharps (F# and C#), and the time signature is 4/4. The tempo is marked 'Moderate country rock' with a quarter note equal to 116 beats per minute. The score consists of two systems. The first system has a treble clef staff with a melody and a bass clef staff with a piano accompaniment. The melody starts with a half note E4, followed by a quarter note F#4, a quarter note G4, and a half note A4. The piano accompaniment starts with a half note E3, followed by a quarter note F#3, a quarter note G3, and a half note A3. The second system continues the melody and piano accompaniment. Above the first system, there are two guitar chord diagrams: an E major chord (E4, F#4, G4, A4) and a B major chord (B3, C#4, D4, E4). Below the second system, there are three guitar chord diagrams: an E major chord (E4, F#4, G4, A4), a B major chord (B3, C#4, D4, E4), and an E major chord (E4, F#4, G4, A4). The piano part is marked with a mezzo-forte (mf) dynamic.



# The Challenge of Information Sharing

- Agreeing to the container for the information
- Agreeing to values
- Agreeing to the scope of the content
- Sharing conceptual definitions
- Did we follow our agreements?
- How do I use this information in my own environment?

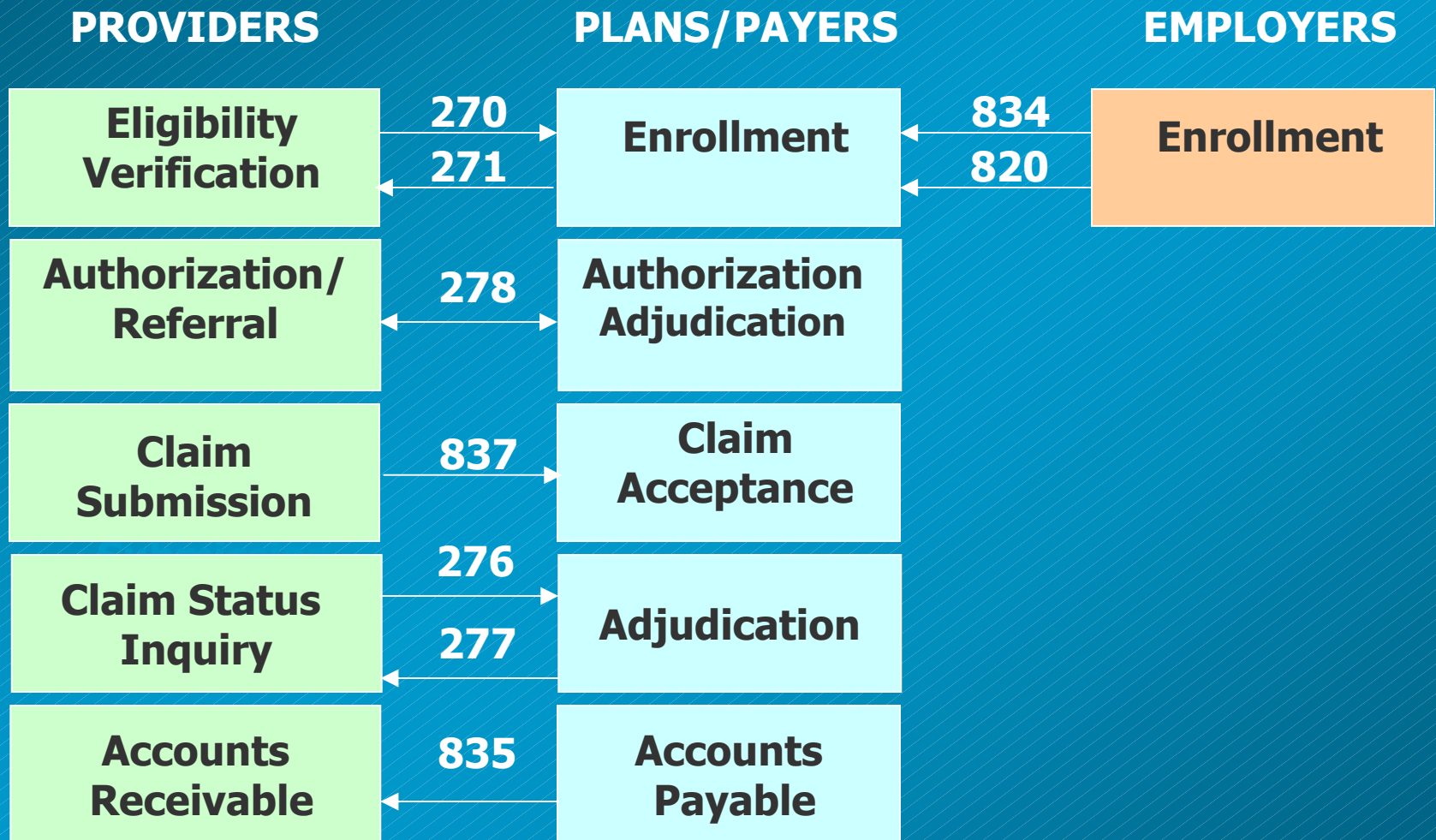
# Sharing concepts – a shared ontology



# What is Transaction-based Business Intelligence?

*“The use of standard healthcare transactions to provide actionable information about the data that is entering and leaving an organization, independent of the sending or receiving systems.”*

# The Standard Transactions



# The Promise of Standard Transactions

- A closer step to shared concepts
- A clear definition of the containers
- A clear definition of the values
- A clear definition of the scope of the content
- A process for validating our agreements

## 837 Health Care Claim: Professional

1. The 837 transaction is designed to transmit one or more claims for each billing provider. The hierarchy of the looping structure is billing provider, subscriber, patient, claim level, and claim service line level. Billing providers who sort claims using this hierarchy will use the 837 more efficiently because information that applies to all lower levels in the hierarchy will not have to be repeated within the transaction.
2. This standard is also recommended for the submission of similar data within a pre-paid managed care context. Referred to as capitated encounters, this data usually does not result in a payment, though it is possible to submit a "mixed" claim that includes both pre-paid and request for payment services. This standard will allow for the submission of data from providers of health care products and services to a Managed Care Organization or other payer. This standard may also be used by payers to share data with plan sponsors, employers, regulatory entities and Community Health Information Networks.
3. This standard can, also, be used as a transaction set in support of the coordination of benefits claims process. Additional looped segments can be used within both the claim and service line levels to transfer each payer's adjudication information to subsequent payers.

**Table 1 - Header**

PAGE #	POS. #	SEC. ID	NAME	USAGE	REPEAT	LOOP REPEAT
62	005	ST	Transaction Set Header	R	1	
63	010	BHT	Beginning of Hierarchical Transaction	R	1	
66	015	REF	Transmission Type Identification	R	1	
LOOP ID - 1000A SUBMITTER NAME						1
67	020	NM1	Submitter Name	R	1	
70	025	N2	Additional Submitter Name Information	S	1	
71	045	PER	Submitter EDI Contact Information	R	2	
LOOP ID - 1000B RECEIVER NAME						1
74	020	NM1	Receiver Name	R	1	
76	025	N2	Receiver Additional Name Information	S	1	

**Table 2 - Detail, Billing/Pay-to Provider Hierarchical Level**

PAGE #	POS. #	SEC. ID	NAME	USAGE	REPEAT	LOOP REPEAT
LOOP ID - 2000A BILLING/PAY-TO PROVIDER HIERARCHICAL LEVEL						>1
77	001	HL	Billing/Pay-to Provider Hierarchical Level	R	1	
79	003	PRV	Billing/Pay-to Provider Specialty Information	S	1	
81	010	CUR	Foreign Currency Information	S	1	
LOOP ID - 2010AA BILLING PROVIDER NAME						1
84	015	NM1	Billing Provider Name	R	1	
87	020	N2	Additional Billing Provider Name Information	S	1	
88	025	N3	Billing Provider Address	R	1	
89	030	N4	Billing Provider City/State/ZIP Code	R	1	
91	035	REF	Billing Provider Secondary Identification	S	8	
94	035	REF	Credit/Debit Card Billing Information	S	8	
96	040	PER	Billing Provider Contact Information	S	2	
LOOP ID - 2010AB PAY-TO PROVIDER NAME						1
99	015	NM1	Pay-to Provider Name	S	1	
102	020	N2	Additional Pay-to Provider Name Information	S	1	

## BILLING/PAY-TO PROVIDER SPECIALTY INFORMATION

Loop: 2000A — BILLING/PAY-TO PROVIDER HIERARCHICAL LEVEL

Usage: SITUATIONAL

Repeat: 1

- Notes:
1. Required if the Rendering Provider is the same entity as the Billing Provider and/or the Pay-to Provider. In these cases, the Rendering Provider is being identified at this level for all subsequent claims/encounters in this HL and Loop ID-2310B is not used.
  2. This PRV is not used when the Billing or Pay-to Provider is a group and the individual Rendering Provider is in loop 2310B. The PRV segment is then coded with the Rendering Provider in loop 2310B.
  3. PRV02 qualifies PRV03.

Example: PRV\*BI\*ZZ\*203BA050N-

### STANDARD

#### PRV Provider Information

Level: Detail

Position: 003

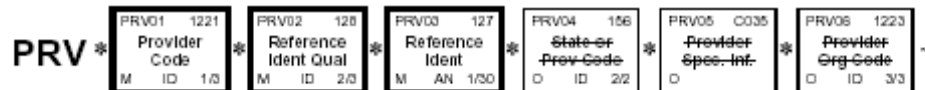
Loop: 2000

Requirement: Optional

Max Use: 1

Purpose: To specify the identifying characteristics of a provider

### DIAGRAM



### ELEMENT SUMMARY

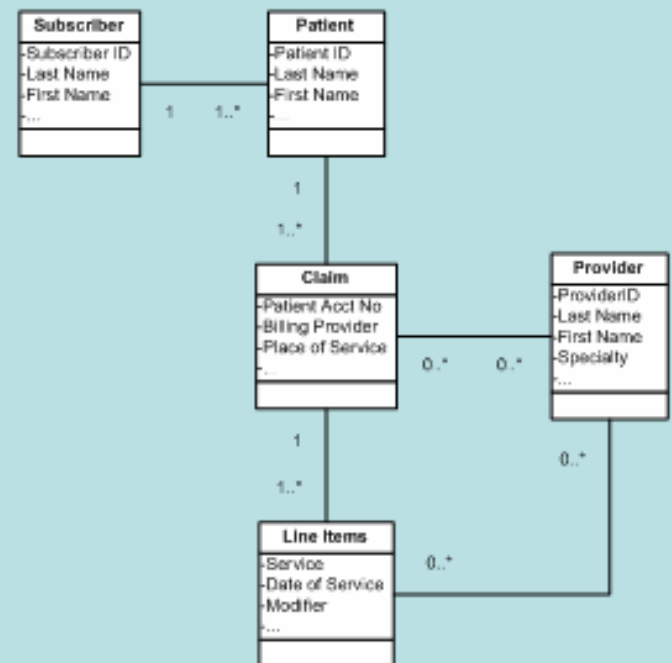
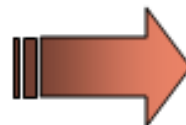
USAGE	REF. DES.	DATA ELEMENT	NAME	ATTRIBUTES								
REQUIRED	PRV01	1221	Provider Code Code identifying the type of provider	M	ID	1/3						
<table><tr><th>CODE</th><th>DEFINITION</th></tr><tr><td>BI</td><td>Billing</td></tr><tr><td>PT</td><td>Pay-To</td></tr></table>							CODE	DEFINITION	BI	Billing	PT	Pay-To
CODE	DEFINITION											
BI	Billing											
PT	Pay-To											

REQUIRED	PAT01	1069	Individual Relationship Code	0	ID	2/2
Code indicating the relationship between two individuals or entities						
ALM: Patients Relationship to Insured						
NSF Reference:						
DA0-17.0						
CODE	DEFINITION					
01	Spouse					
04	Grandfather or Grandmother					
05	Grandson or Granddaughter					
07	Nephew or Niece					
09	Adopted Child					
10	Foster Child					
15	Ward					
17	Stepson or Stepdaughter					
19	Child					
20	Employee					
21	Unknown					
22	Handicapped Dependent					
23	Sponsored Dependent					
24	Dependent of a Minor Dependent					
29	Significant Other					
32	Mother					
33	Father					
34	Other Adult					
36	Emancipated Minor					
39	Organ Donor					
40	Cadaver Donor					
41	Injured Plaintiff					
43	Child Where Insured Has No Financial Responsibility					
53	Life Partner					
G8	Other Relationship					

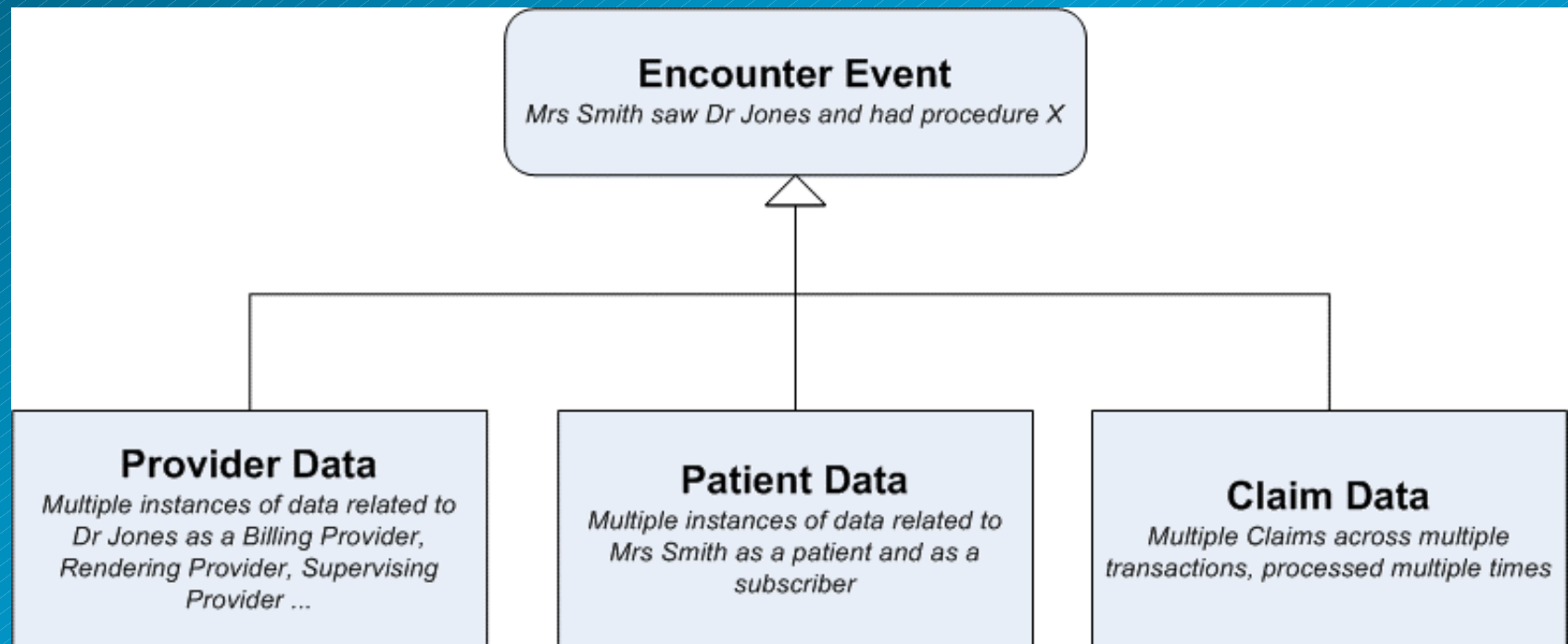


# Getting to 'Business Normalized Data'

ISA\*00\*2984039820\*00\*4893082093\*01\*5848394838475  
 93\*01\*483928374928374\*031225\*0948\*U\*00401\*49384  
 0394\*0\*P\*~GS\*HC\*584930495830495\*48392039482039  
 4\*20031225\*09481500\*584930495\*X\*004010X098A1~S  
 T\*837\*567567567~BHT\*0019\*00\*23498387298\*2003122  
 5\*09481500\*CH~REF\*87\*004010X098A1~NM1\*41\*2\*Fre  
 d's Billing Service\*\*\*\*\*46\*234234234~PER\*IC\*Mary  
 Jones\*TE\*7894893848~NM1\*40\*2\*Orange  
 Cross\*\*\*\*\*46\*678678678~HL\*1\*\*20\*1~NM1\*85\*2\*Fred's  
 Billing Service\*\*\*\*\*24\*234234234~N3\*578 Main St\*PO  
 7789~N4\*Baltimore\*MD\*21205~REF\*1A\*487487487~PE  
 R\*IC\*Mary Jones\*TE\*7894893848~NM1\*87\*2\*Family  
 Docs DC\*\*\*\*\*24\*456456456~N3\*567 N Oak  
 St~N4\*Washington\*DC\*200024768~REF\*1D\*2498793~H  
 L\*2\*1\*22\*0~SBR\*P\*18\*239239239\*State  
 Dept\*\*\*\*\*09~NM1\*IL\*1\*Powell\*Colin\*\*\*\*M\*456890~N3\*36  
 7 S State  
 St~N4\*Washington\*DC\*20002~DMG\*D8\*19410401\*M~R  
 EF\*23\*254254254~NM1\*PR\*2\*Orange  
 Cross\*\*\*\*\*PJ\*78787878~N3\*1222 Cherry  
 Street~N4\*Baltimore\*MD\*21250~CLM\*378378378\*145.00  
 \*\*\*11::1\*Y\*A\*Y\*Y\*B~DTP\*435\*D8\*20031205~DTP\*096\*D  
 8\*20031206~AMT\*F5\*20.00~HI\*BK:1540\*BF:36029~NM1  
 \*82\*1\*Smith\*John\*24\*898898898~PRV\*PE\*ZZ\*207RH  
 0003X~REF\*1D\*254254254~LX\*1~SV1\*HC:99243\*145.0  
 0\*UN\*1\*11\*\*1\*\*...



# Abstracting to a higher level



# Getting to 'Actionable information'

- Defining the business problem
- Asking the right business questions
- Analyzing the results
- Defining potential actions
- Defining the value of action

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- Asking the right business questions
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# Business Scenario

- A provider clinic has identified an increasing trend in claim denials
- The denials are resulting in a significant impact on cash flow
- The problem does not appear to be related to an issue with the electronic submission of claims

# Getting to 'Actionable information'

- Defining the business problem
- Asking the right business questions
- Analyzing the results
- Defining potential actions
- Defining the value of action

# Business Questions

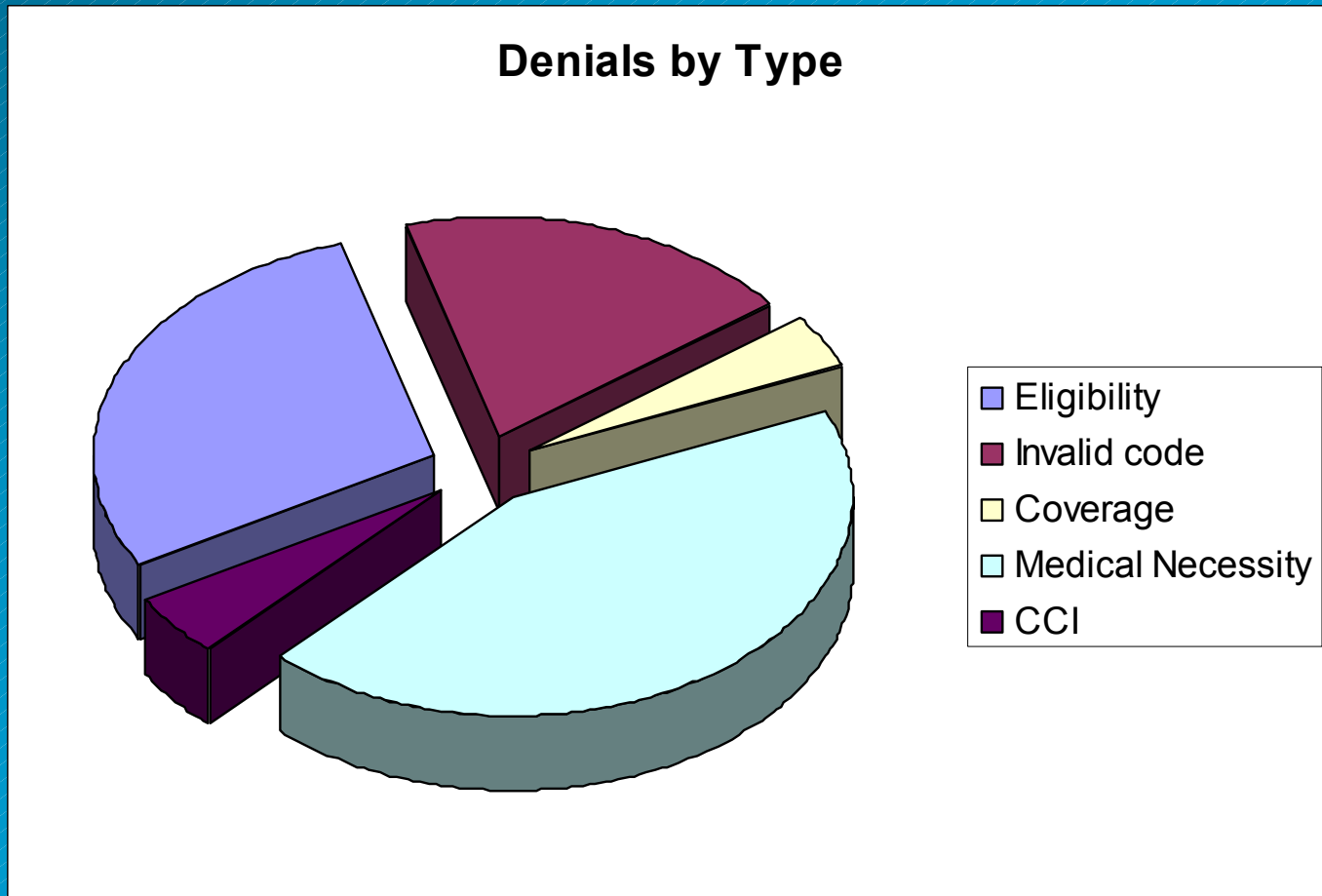
- Is there a common pattern in the reasons for denial?
- What are the most common types of services that are associated with denials?
- Which payers are most frequently associated with denials?
- Are these denials more common with a specific rendering provider?

# Getting to 'Actionable information'

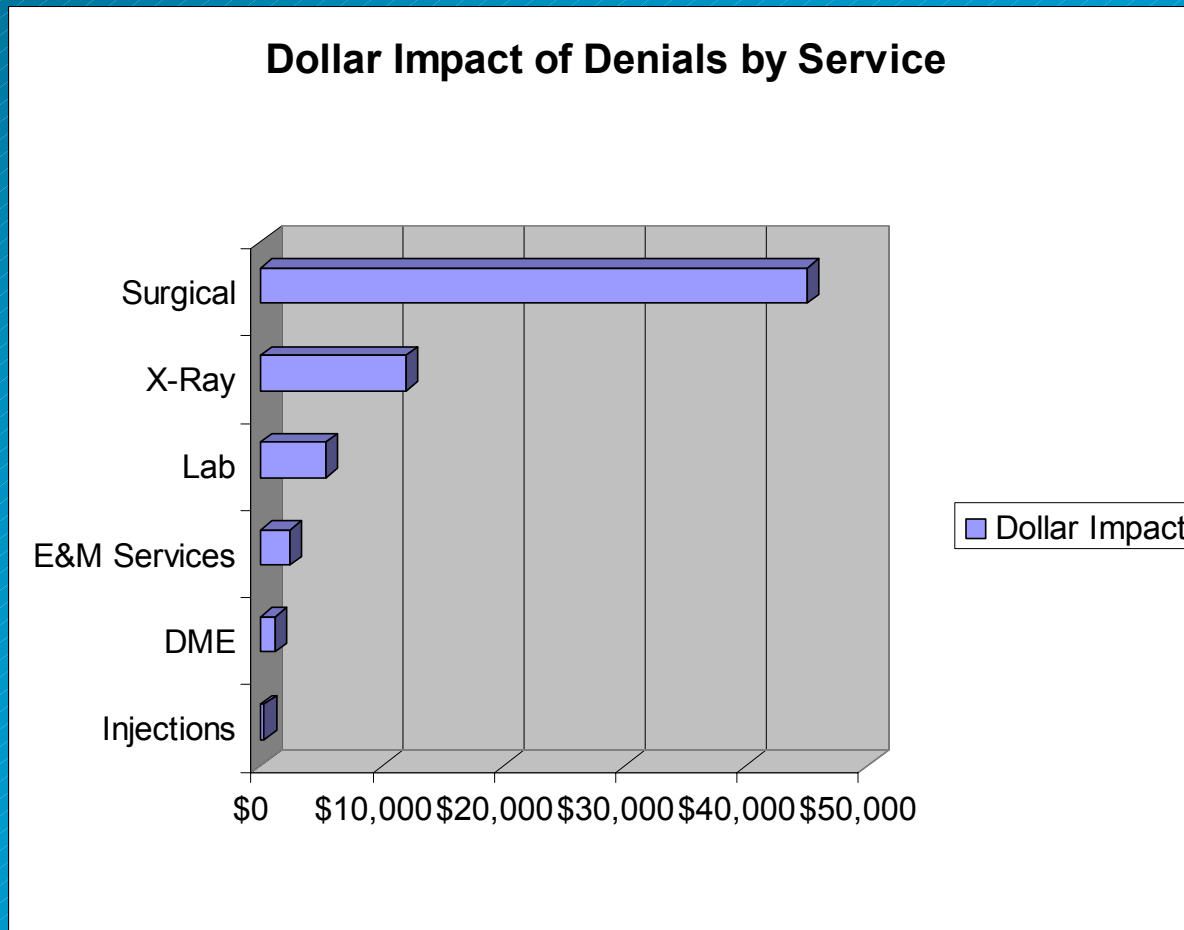
- Defining the business problem
- Asking the right business questions
- **Analyzing the results**
- Defining potential actions
- Defining the value of action



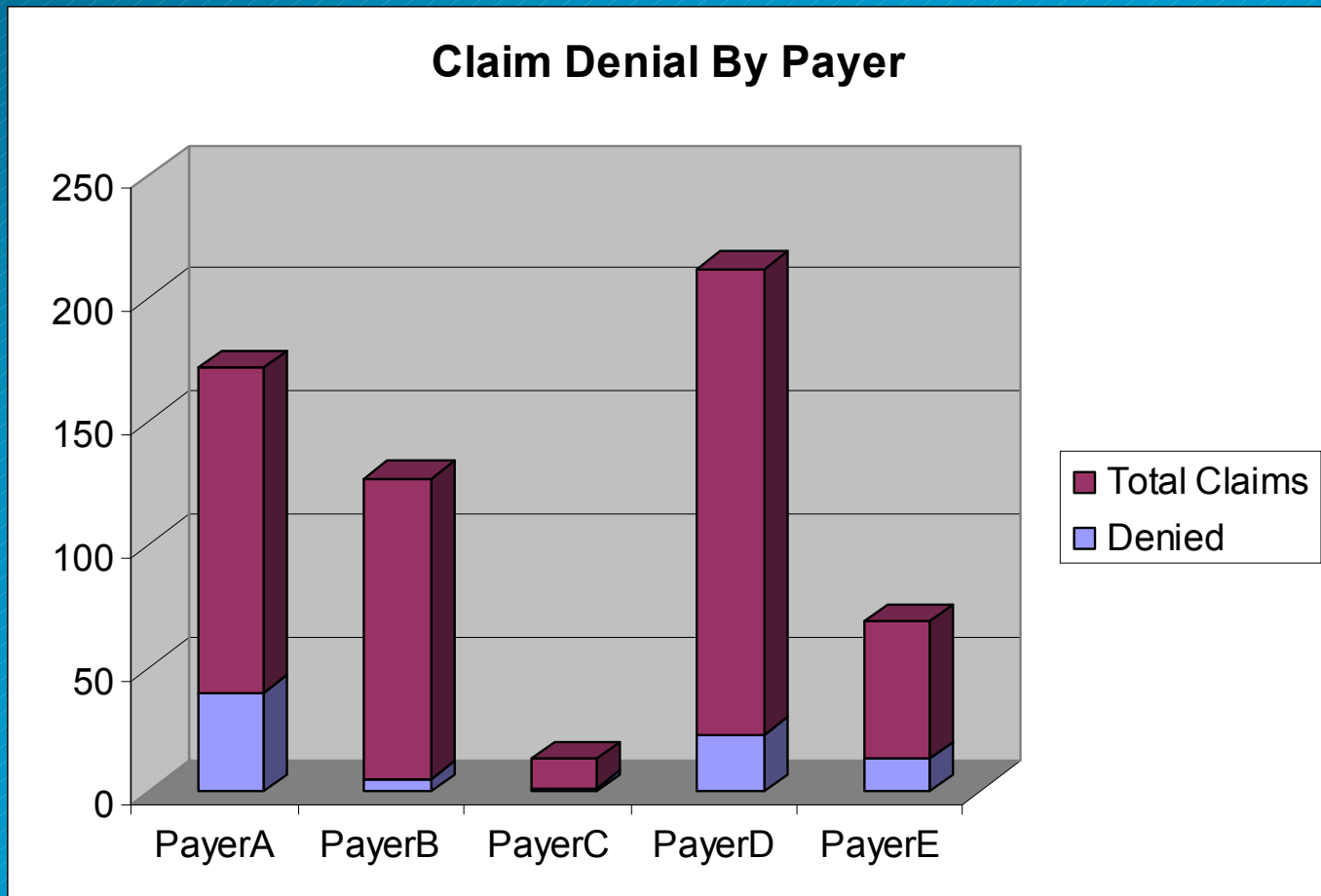
# Is there a common pattern in the reasons for denial?



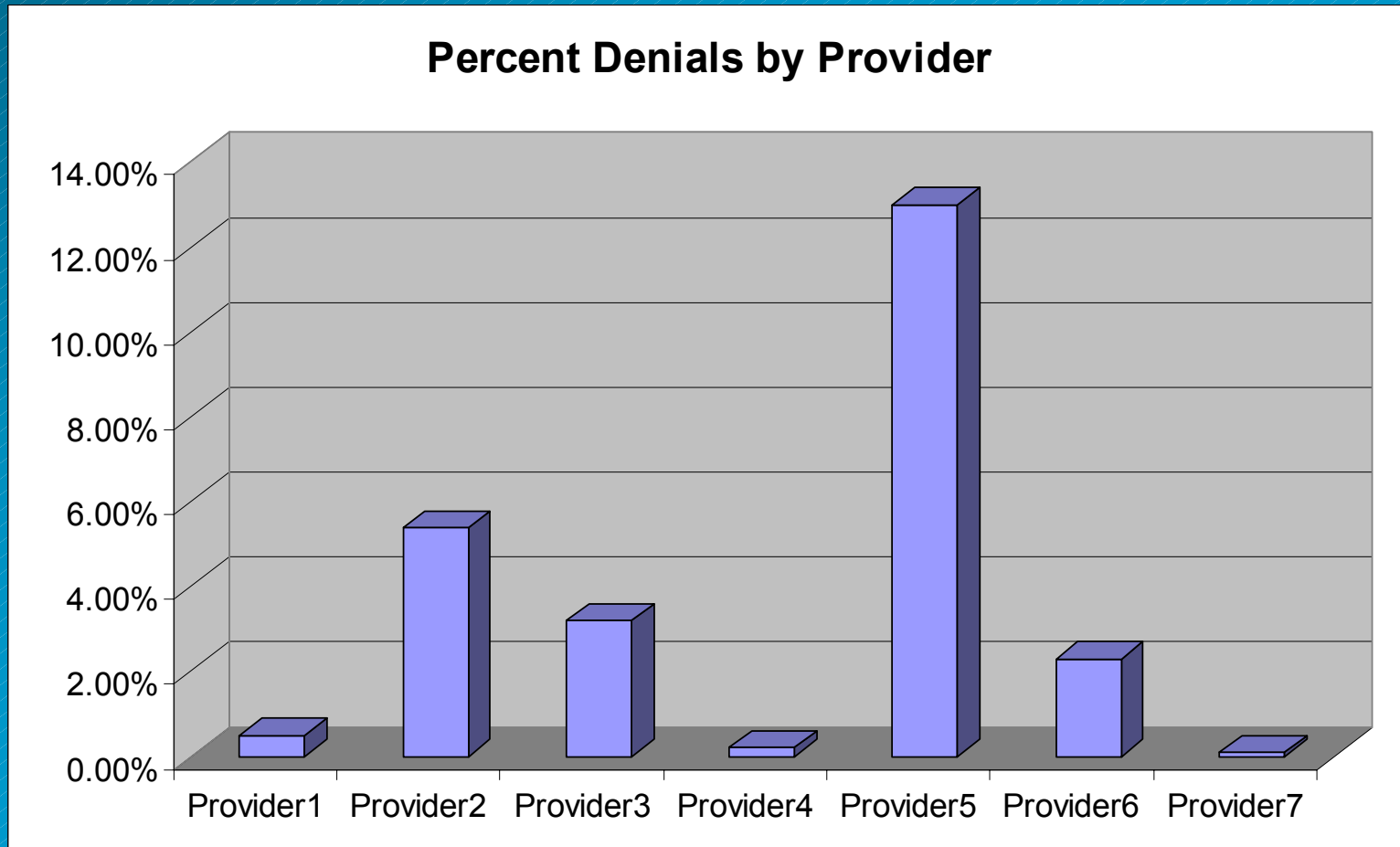
# What types of services are associated with denials?



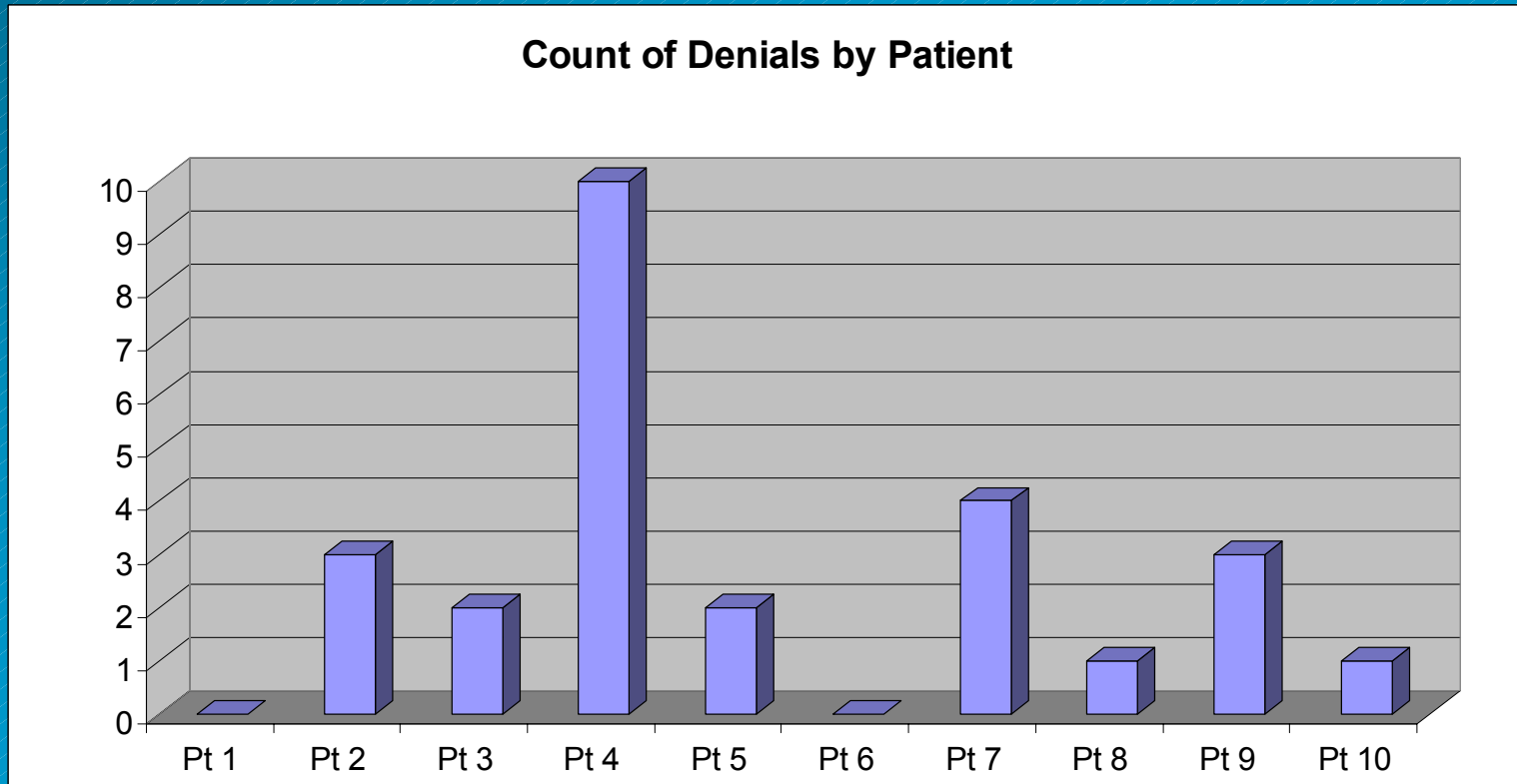
# Which payers are associated with denials?



# Which providers are associated with denials?



# Which patients are associated with denials?



# Getting to 'Actionable information'

- Defining the business problem
- Asking the right business questions
- Analyzing the results
- Defining potential actions
- Defining the value of action

# Potential Actions

- Eligibility processes are tightened at the time of scheduling
- Coding procedures are changed
- Communication with patients around coverage issues
- Educate individual providers about coverage issues

# Getting to 'Actionable information'

- Defining the business problem
- Asking the right business questions
- Analyzing the results
- Defining potential actions
- Defining the value of action



# Defining the Value of Action

- Measurable improvement in cash flow that can be specifically attributed to actions
- Improved patient relationship
- Less rebilling and distractive denial management

# Advantages of Transaction-based Business Intelligence

- Gold standard for inbound and outbound transactions
- Minimal dependencies on legacy integration
- Limited IT resource requirements
- Enhanced opportunities for benchmarking

# Advantages of Transaction-based Business Intelligence

- Business intelligence independent of the data source
- Leverages existing compliance related investments
- Provides an auditing source independent of legacy systems for transaction related controls for inbound and outbound transactions to support Sarbanes-Oxley and other corporate compliance reporting requirements

# Contact Information

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