

Big Data and FWA

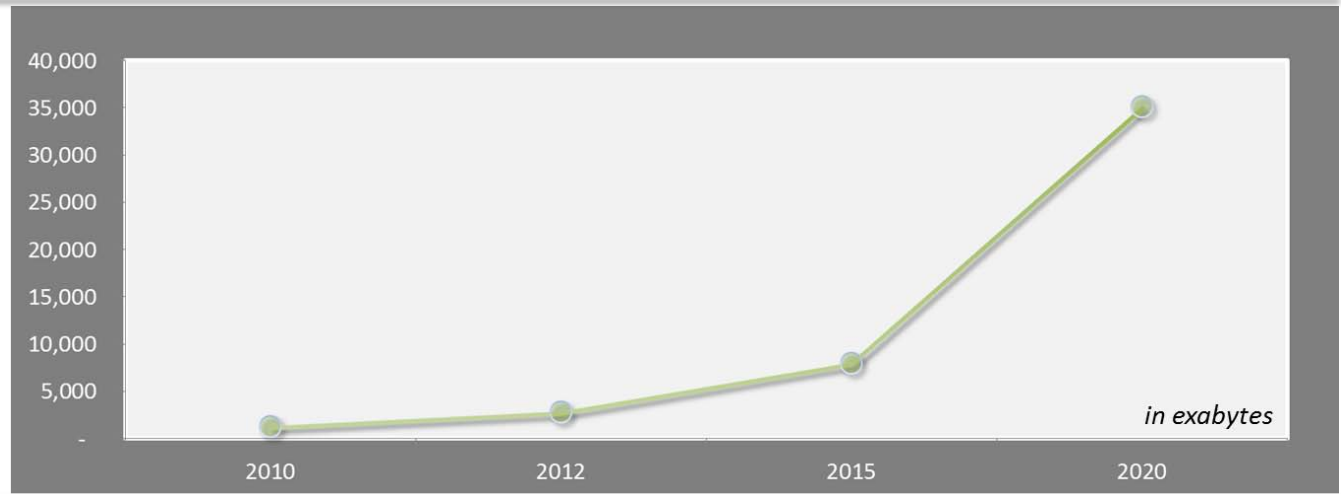
August 20, 2013

Agenda

- Relevance of Big Data in FWA
- Practical Applications
- Q&A

Big Data: What is it?

DATA
CREATION IS
EXPLODING



Big Data allows for high quality decisions to be made based on all of the evidence available.

It is a tool that amplifies the usefulness and value of the increasing pool of complex data.

The Healthcare Challenge

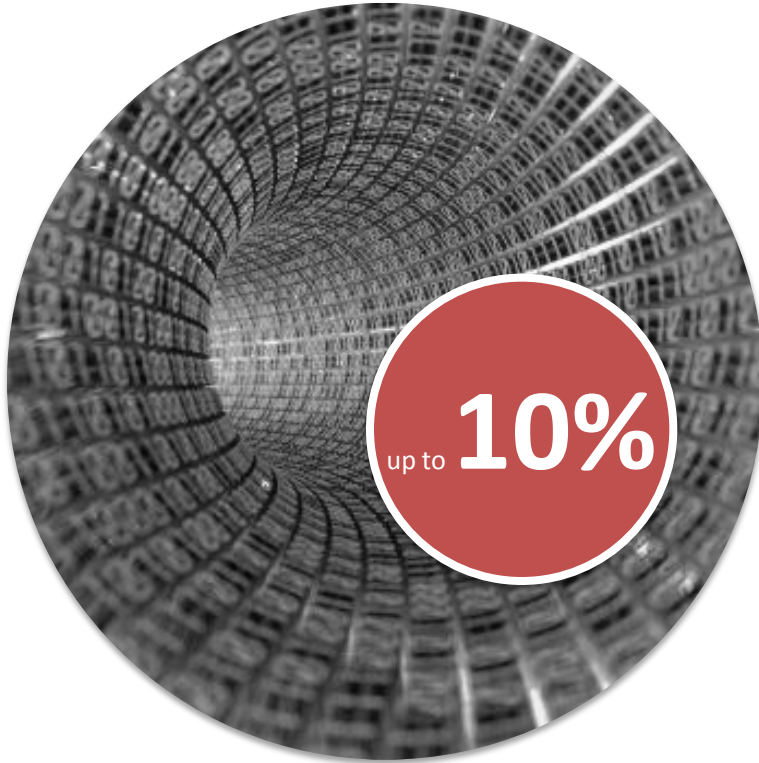
Big Data could save U.S. Healthcare over **\$300 Billion.**



Sources: IBM Global Business Services; IBM Institute for Business Value. McKinsey.

Fraud, Waste and Abuse

U.S. Healthcare Spend: FWA Loss



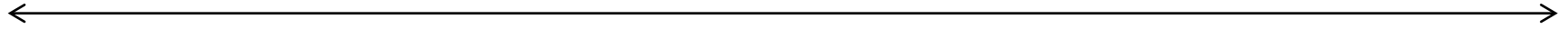
Components for fighting FWA?

1. Comprehensive and consistent claims database
2. Trained algorithms to process and check claims for accuracy and to detect cases with a high likelihood of fraud, defects, or inaccuracy either retroactively or in real time
3. When used in near real time, automated systems can identify overpayments before payouts are made, recouping significant costs

Source: McKinsey

The Technology Lifecycle

DEGREE OF TECHNOLOGY MATURITY



Spreadsheets

Deterministic Edits
and Data Marts

Advanced Analytics
and Big Data

Customizable

More Value Delivered

Value Maximized

Low Cost Solution

More Applied Expertise

Near Real-Time Discovery

More Efficient Technology

Holistic Approach

Most Efficient

Efficiency

Efficiency

Discovery

Discovery

Maximum Value

Maximum Value

ADVANTAGES

DISADVANTAGES

Area: Ambulance

Dimensions: Shows:
1: Service Provider x 10
2: Service Date x 100
3: Please drag a dimension here 10

Rank by Measure Top/Bottom:
Total Paid x Top

Apply

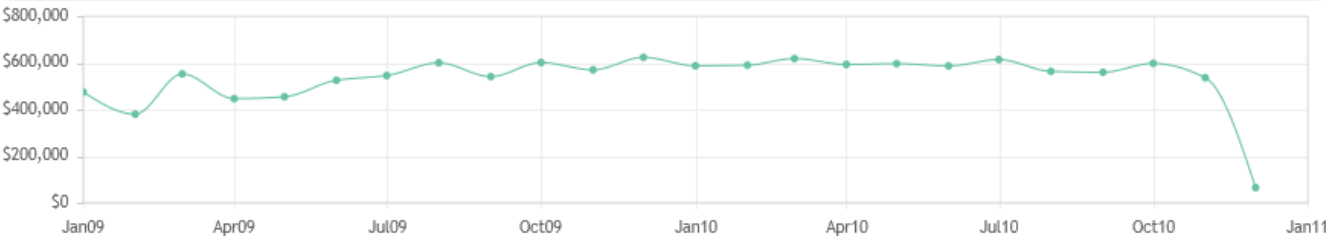
- | Dimension | Measure | Time |
|--------------------------|---------|------|
| ▶ Billing Provider 3 | | |
| Billing Provider HOPS ID | | |
| Billing Provider NPI | | |
| Billing Provider Tax ID | | |
| Claim Status | | |
| Claim Type | | |
| ▶ Diagnosis Level 1 | | |
| Gender | | |
| LOB | | |
| Modifier | | |
| Patient Age Group | | |
| Patient Name | | |
| ▶ Patient State | | |
| Peer Group | | |
| POS | | |
| ▶ Procedure Level 1 | | |
| Provider Type | | |
| SAD | | |
| ▶ Service Provider 3 | | |
| Service Provider | | |
| Service Provider HOPS ID | | |
| Service Provider NPI | | |
| ▶ Service Provider State | | |
| Service Provider Tax ID | | |

Filters: Service Provider = "90232070516";

Service Provider -> Service Date	Total Paid
90232070516-SARVIS J MCCARTHY	\$21,702,862

📄 📊

Time Dimension: Service Date x Total Paid for Service Provider = 90232070516 (24 months ending Dec-10)



Aberrant Trend Ambulance

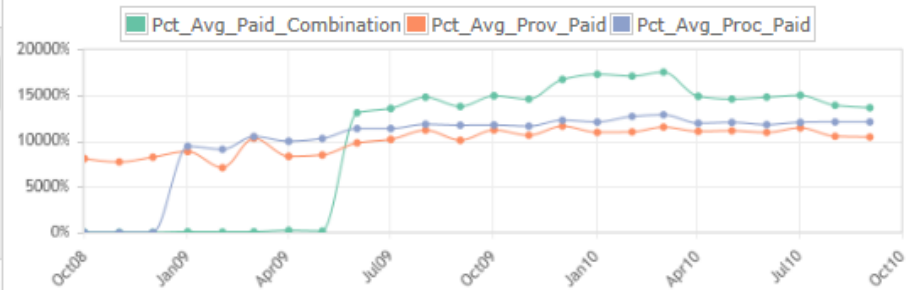
Please select DM report version: Oct 01, 2008 - Sep 30, 2010-Amb

Aberrance Type : 1 - Aberrant Increases

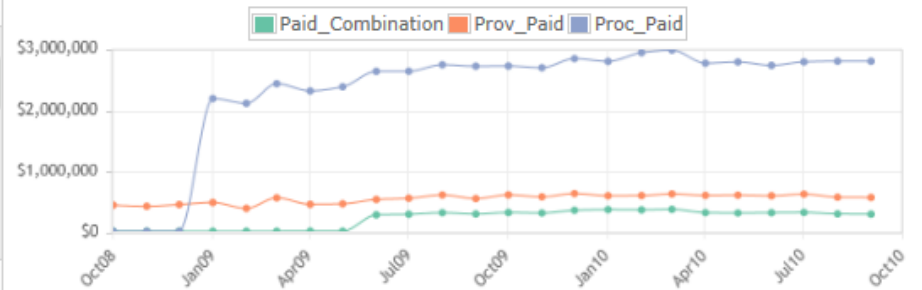
Ref	Provider_No	Provider_Name	Procedure	Procedure_Description	Specialty	Spec	Total_Paid	Rat
4.00	90232070516	SARVIS J MCCARTHY	A0427	AMB SRVC ALS EMERG TRANSPORT LEVEL 1	AMB		\$4,998,681	
17.00	26425933463	SPASMODIC BULGER	A0999	UNLISTED AMBULANCE SERVICE	AMB		\$1,502,483	
25.00	26425933463	SPASMODIC BULGER	A0434	SPECIALTY CARE TRANSPORT	AMB		\$1,079,498	
31.00	05624819675	SALICK M FAY	A0427	AMB SRVC ALS EMERG TRANSPORT LEVEL 1	AMB		\$1,030,475	
32.00	59551756377	ALEJANDRO NEDLEY	A0428	AMB SERVICE BLS NONEMERG TRANSPORT	AMB		\$1,003,521	
54.00	71679630615	CHRISTOPHER BELT FAMILY	A0425	GROUND MILEAGE PER STATUTE MILE	AMB		\$605,164	

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From_Mo	Pct_Avg_Paid_Combinatic	Pct_Avg_Prov_Paid	Pct_Avg_Proc_Paid
2008/10	0%	8052%	0%
2008/11	0%	7693%	0%
2008/12	0%	8215%	0%
2009/01	81%	8825%	9400%
2009/02	55%	7060%	9060%
2009/03	87%	10270%	10453%
2009/04	225%	8204%	8020%



From_Mo	Paid_Combination	Prov_Paid	Proc_Paid
2008/10	\$0	\$433,167	\$0
2008/11	\$0	\$413,855	\$0
2008/12	\$0	\$441,935	\$0
2009/01	\$1,697	\$474,754	\$2,189,566
2009/02	\$1,155	\$379,812	\$2,110,316
2009/03	\$1,832	\$552,466	\$2,434,846
2009/04	\$4,706	\$446,202	\$2,315,182



High Severity Evaluation and Management

Please select DM report version: July 1, 2011 - June 30, 2012

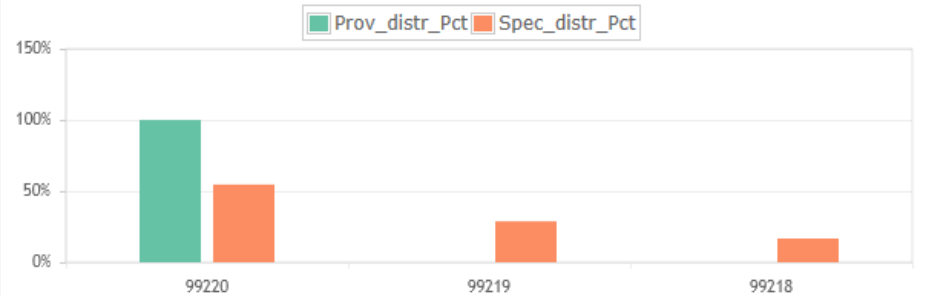
Provider_No	Provider_Name	Code_Set	Overpayment	Pct_Total	CodeSet_Rankin	CodeSet_Rank	Prov_Rank	Specialty_Description	Specialty	Procedure
42308416409	Wright MICROSURGI	21B	\$73,134	37%	2,763,223	1	1	Internal medicine	11	99220
42470172193	DIANNA AREA CRAN	21B	\$66,594	37%	2,515,228	2	2	Internal medicine	11	99220
58894535353	SHEELA K BRAUN	21	\$46,758	48%	2,276,865	3	3	General surgery	2	99215
42469008645	VALDESE OF PI	21B	\$55,894	37%	2,113,599	4	4	Internal medicine	11	99220
42458911944	RIPLEY BUTTE	21B	\$54,536	37%	2,055,476	5	5	Internal medicine	11	99220
59462988809	WARRENSBURG REE	21	\$45,887	43%	2,012,145	6	6	Dermatology	7	99214
42467579265	MINO A BURGGRAAF	21B	\$49,646	37%	1,873,180	7	8	Internal medicine	11	99220

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Procedure Summary

Procedure	Procedure_Description	procPaid	Severity	Prov_distr_Pct	Spec_distr_Pct	Overpayer
99220	OBSERVATION CAF	\$193,563	5	100%	54.62%	\$87,829
99219	OBSERVATION CAF	\$0	3	0%	28.73%	\$-10,555
99218	OBSERVATION CAF	\$0	1	0%	16.64%	\$-4,139

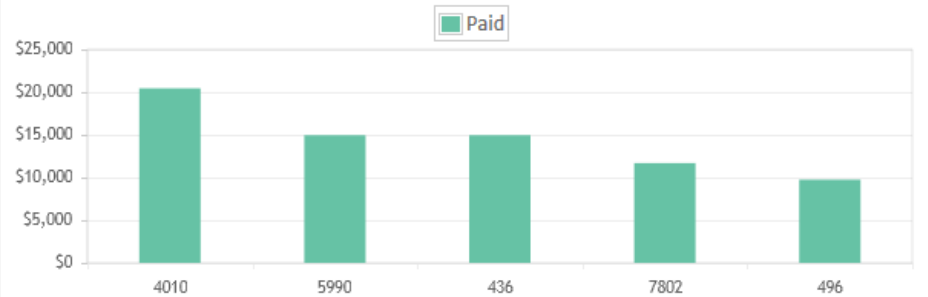
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Diagnosis Summary

Primary_Diagnosis	Diagnosis_Description	Paid	Billed	Visits	Units
4010	Malignant Essential Hyperte	\$20,441.00	\$21,000.00	25	28
5990	Urinary Tract Infection Unsp	\$14,961.00	\$15,000.00	18	20
436	Acute Ill Defined Cv Disease	\$14,953.00	\$15,000.00	17	20
7802	Syncope And Collapse	\$11,700.00	\$12,000.00	13	16
496	Chronic Airway Obstruction	\$9,750.00	\$9,750.00	10	13
2500	Diabetes Mellitus Wo Compl	\$9,000.00	\$9,000.00	10	12

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Correct Coding Initiative Analysis

Please select DM report version: **July 1, 2011 - June 30, 2012**

Policy Type: **0 - All**

Provider Summary

Rank	Provider_No	Provider_Name	Instances	Total_Billed	Total_Paid	Total_Overpayment	Policy_Name	Specialty_Description
1	59693369935	ELECTROCARDIOGRAM ASE	30,203	\$1,624,123	\$1,122,727	\$455,820	0 - All	Pathology
2	60639258115	SHERRI A TEMPEL	158	\$1,055,751	\$573,044	\$385,480	0 - All	Diagnostic radiology
3	09009407124	JOYCE KOSYAN	585	\$1,275,732	\$726,892	\$337,054	0 - All	Gastroenterology
4	03424783597	MOUNTY AREA VOLUNTEER	8,111	\$871,376	\$527,345	\$285,678	0 - All	Clinical laboratory (billing i
5	59049231865	HARBOURTOWN C BAKSHI	16,238	\$873,770	\$591,930	\$213,270	0 - All	Pathology
6	01928691552	LIFELINE J JUE	265	\$570,504	\$326,540	\$153,850	0 - All	Gastroenterology
7	01765540275	OWENSVILLE DRA H	1,215	\$402,250	\$257,458	\$122,817	0 - All	Dermatology

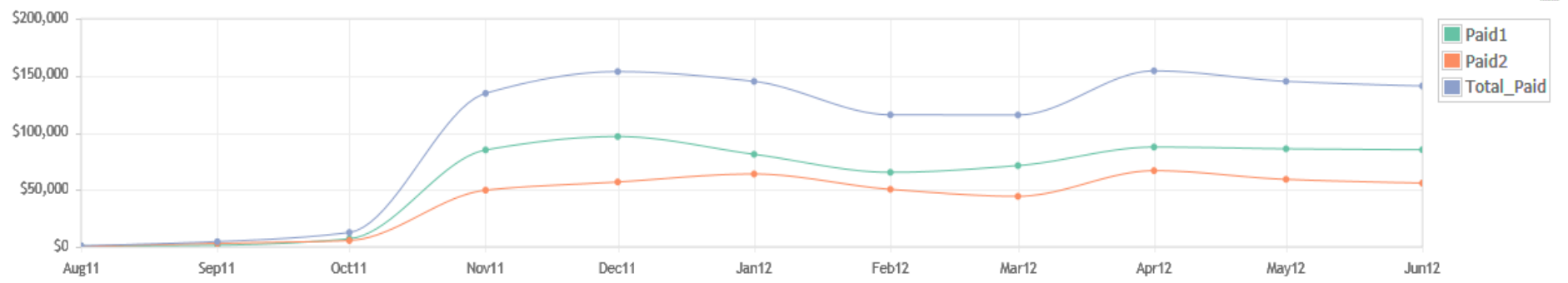
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Code Summary

Procedure1	Modifier1	Billed1	Paid1	Procedure2	Modifier2	Billed2	Paid2	Instances	Overpayment	Mod_Allwbl	Total_Billed	Total_Paid
88184		\$89,618	\$64,955	86360		\$52,898	\$38,531	525	\$38,531	1	\$142,516	\$103,486
83914		\$21,870	\$18,223	83904	59	\$36,727	\$30,603	10	\$30,603	1	\$58,598	\$48,826
80061		\$59,051	\$42,601	83721		\$42,024	\$30,347	1,554	\$30,347	1	\$101,076	\$72,949
80069		\$57,899	\$36,784	82565		\$36,262	\$22,880	2,447	\$22,880	1	\$94,161	\$59,665
80069		\$46,337	\$29,117	82310		\$27,651	\$17,374	1,962	\$17,374	1	\$73,989	\$46,492
80069		\$26,275	\$18,209	80076		\$24,697	\$17,115	1,100	\$17,115	1	\$50,972	\$35,324
83014	on	\$12,150	\$10,121	83004	on	\$10,878	\$16,563	0	\$16,563	1	\$22,038	\$26,605

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Provider CCI Trend



Area: CCI

Dimensions: Shows:

1: Mod Allowable x 10

2: Provider x 10

3: CCI Pair x 10

Rank by Measure Top/Bottom:

Overpaid x Top

Apply

Dimension	Measure	Time
<input checked="" type="checkbox"/>	Overpaid	
<input type="checkbox"/>	Billed1	
<input type="checkbox"/>	Billed2	
<input checked="" type="checkbox"/>	Instances	
<input type="checkbox"/>	Paid1	

Filters:

Mod Allowable -> Provider -> CCI Pair	Overpaid	Instances
+ 1	\$18,711,691	198,646
+ 0	\$1,562,609	20,489

Case Study: Large Commercial Plan

CHALLENGE

- **Many data sources, different payment activities**—including numerous geographic regions with no common data infrastructure
- Simultaneously address regulatory and compliance considerations

APPROACH

- **Hosted data environment with over 65 data sources**
- Ability to analyze entire population data set in a matter of minutes
- Precise targeting of at risk areas with fraud detection library

RESULTS

- **One billion dollars identified**
- 300 million recovered
- Staff associated with drug diversion identified
- Improved business efficiency

Criteria: Efficiency and Maximum Value



Big Data
Platform



Analytics



Human
Expertise

Questions

Contact Information

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