



# USING TECHNOLOGY TO IMPROVE COMPLIANCE ACROSS THE RISK ADJUSTMENT LIFECYCLE

## **Panelists:**

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## **Moderator:**

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Episource is a technology-driven healthcare services firm building elegantly simple and innovative risk adjustment solutions for value-based care.

# UPMC

LIFE CHANGING MEDICINE

## UPMC: AN INTEGRATED DELIVERY & FINANCE SYSTEM

3.7M

Member Insurance  
Services Division –  
UPMC Health Plan

\$21B

Annual  
revenue

89K

Employees – largest  
private nongovernmental  
employer in PA

40

Hospitals

## UPMC HEALTH SERVICES

8,500

Licensed beds

6,000

Affiliated and  
employed  
physicians

388K

Inpatient admissions  
and observation cases

5.5M

Outpatient visits





The Mount Sinai Health System is New York City's largest academic medical system, encompassing eight hospitals, a leading medical school, and a vast network of ambulatory practices throughout the greater New York region. Mount Sinai is a national and international source of unrivaled education, translational research and discovery, and collaborative clinical leadership ensuring that we deliver the highest quality care—from prevention to treatment of the most serious and complex human diseases.

# PRESENTATION AGENDA

- 01 Tech-Enabled Compliance Across the Risk Adjustment Lifecycle
- 02 Prospective Risk Adjustment
- 03 Data Analytics
- 04 Retrospective Reviews
- 05 Key Takeaways



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**TECH-ENABLED COMPLIANCE ACROSS  
THE RISK ADJUSTMENT LIFECYCLE**

# OIG & CMS: CRACKING DOWN ON NONCOMPLIANT RISK-ADJUSTMENT PRACTICES

- As payers in government (Medicare) and the commercial arena (private plans) see the recoupment rate of services billed incorrectly/non-compliantly skyrocket, audits will continue to become more of a focus.
- This makes proactive review of and oversight into coding and submission processes more critical than ever.
- In this landscape, everyone who touches data has a responsibility to make sure it's accurate—the payer, provider, and vendor.



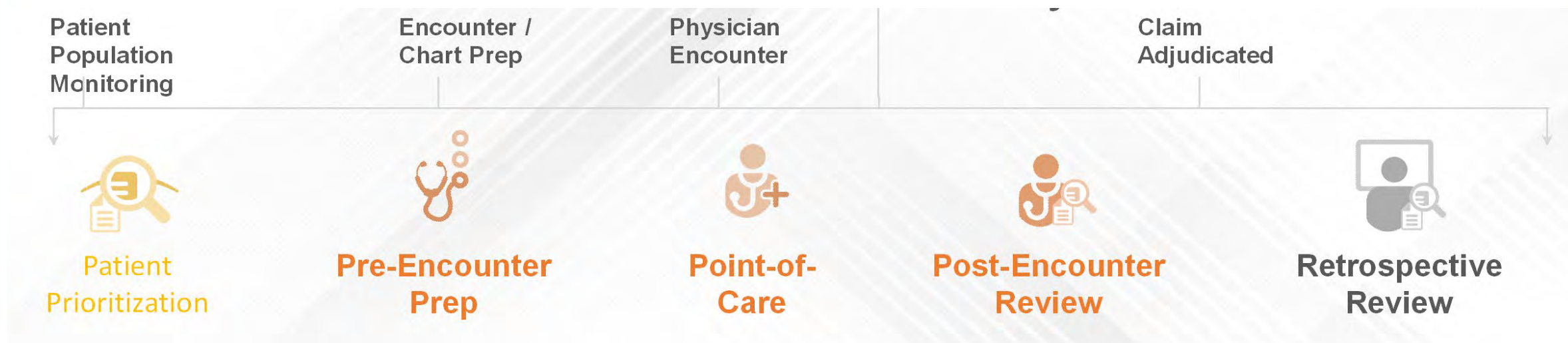
# REPERCUSSIONS OF BEING AUDITED

- 01 ADMINISTRATIVE BURDEN**  
Preparing for and undergoing an audit is a huge task which requires a great deal of time and effort.
- 02 FINANCIAL IMPLICATIONS**  
Health plans may see a reduction in monthly CMS payments as well as **up to 3X** the government's damages caused by the violator. The Civil Monetary Penalty (CMP) may range from **\$5,500 to \$11,000** for each false claim.
- 03 LAWSUITS AND NEGATIVE MEDIA ATTENTION**  
This type of press can damage organizations' reputations and brands and hurt their ability to attract and retain members.



# DATA INTEGRITY ACROSS THE RISK-ADJUSTMENT LIFECYCLE

- The OIG is increasingly using sophisticated data techniques to target and audit noncompliant codes.
- Ensuring compliance requires a data-integrity focus to be incorporated across all risk adjustment functions.



# HOW NLP TECHNOLOGY CAN HELP

## Before NLP

Disparate and Disorganized Data



Coders manually search records for missed and **inaccurate diagnoses**



## After NLP

NLP Analyzes and Organizes Data



Prioritized, **organized queue** of diagnostic codes via **machine learning**



Reporting to CMS

↓ Decrease in risk capture

↑ 20-30% Increase in risk capture




- The risk-adjustment process is **extremely complicated** and **necessitates manual labor that should otherwise be automated.**
- NLP pulls clinical data automatically from medical records with a **high level of accuracy.**

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# PROSPECTIVE RISK ADJUSTMENT

# UPMC NLP-ENABLED PROVIDER WORKFLOW

	 <b>Pre-Encounter PREP</b>	 <b>Point-of-Care</b>	 <b>Post-Encounter REVIEW</b>
<b>What</b>	Leverage NLP to analyze historical medical record data in addition to claims	Push identified gaps to the physicians at the point of care through the EHR	Leverage NLP to streamline pre-bill coding prior to submission for accurate and complete claims
<b>Who</b>	Nurse / Medical Assistant Care Manager / Assistant CDI Specialist Physician / APP Provider Educator	Physician / APP	Coding / Billing Staff CDI Specialist / Staff Provider Educator
<b>Why</b>	<ul style="list-style-type: none"> <li>• 10-15% increase in prospective opportunity identified</li> <li>• Helps prioritize members that need to be seen</li> </ul>	<ul style="list-style-type: none"> <li>• Provide clinical evidence and documentation tools</li> <li>• Add diagnosis to claim and problem list</li> <li>• Analytics</li> </ul>	<ul style="list-style-type: none"> <li>• Identify documented but missed codes</li> <li>• Decrease number of encounters requiring human review</li> <li>• Remove non-compliant diagnoses</li> </ul>

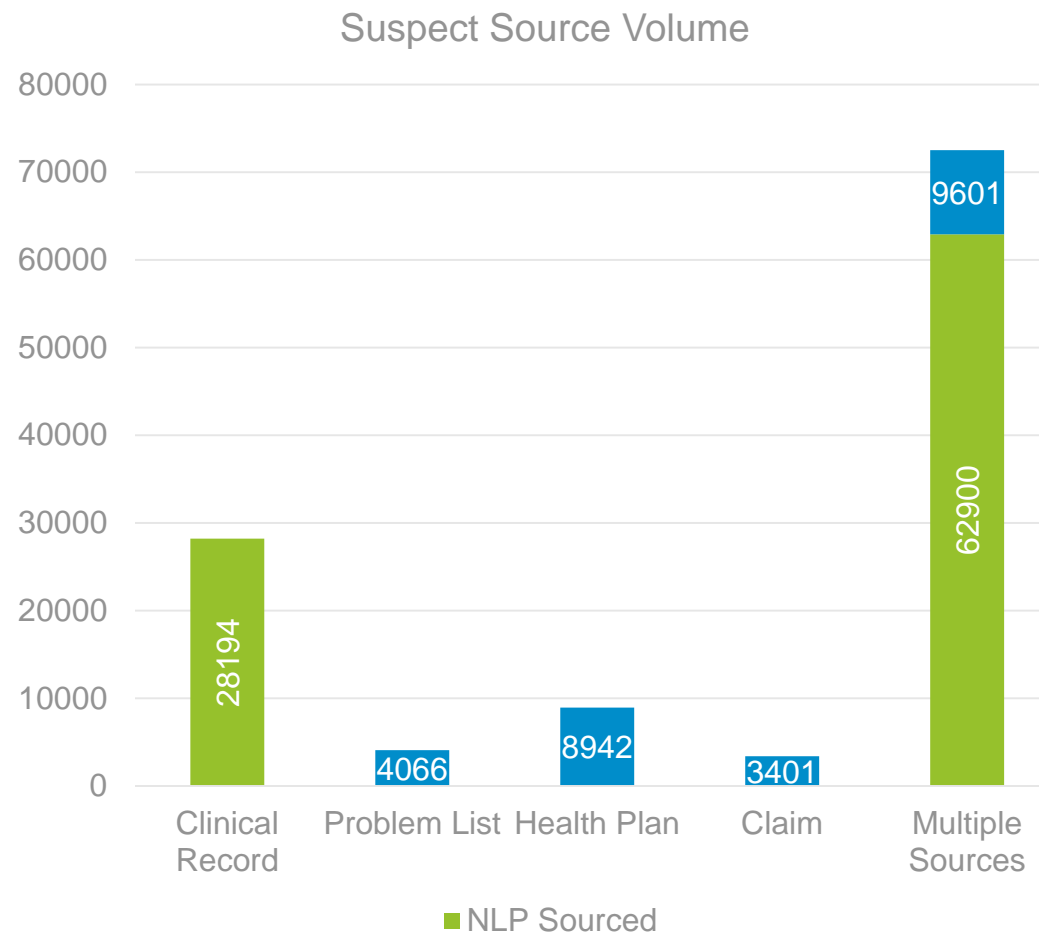
# OVERALL SUSPECTING IMPACT AT UPMC

66%

Overall precision/acceptance rate  
117K accepted out of 177K total presented

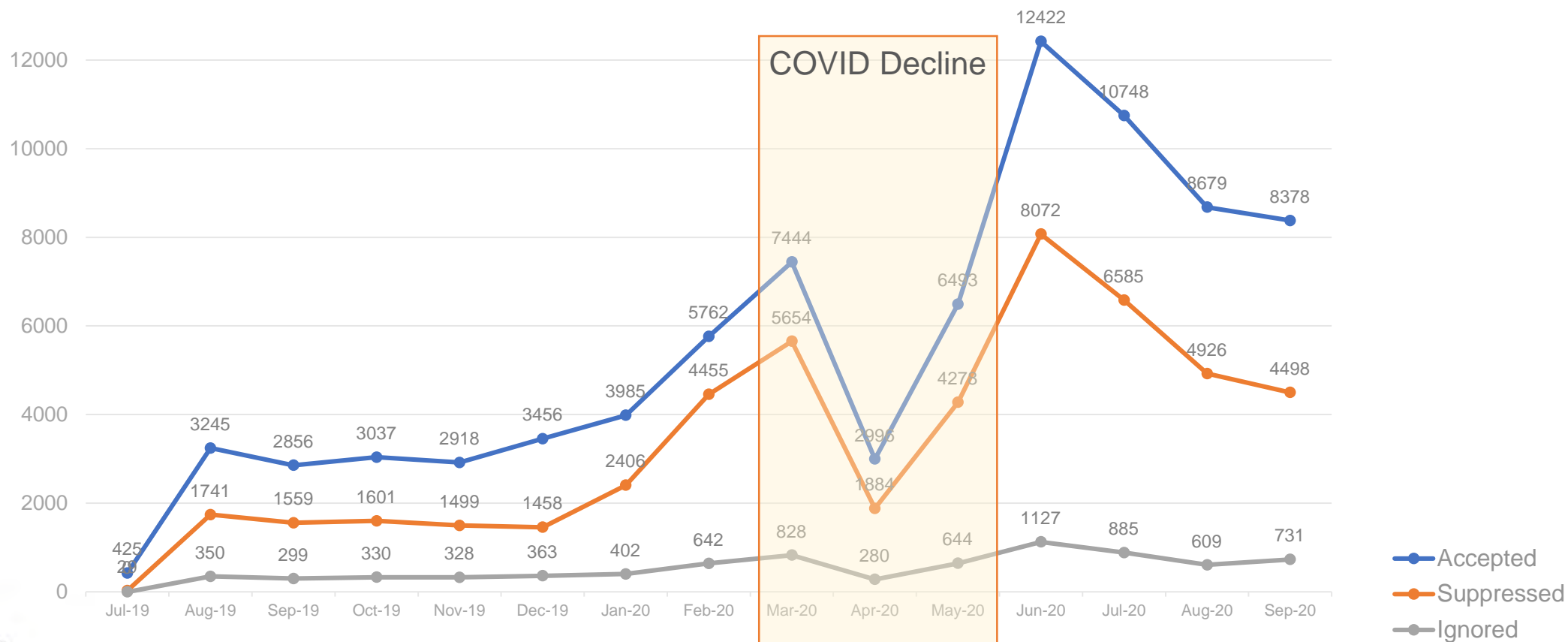
Of total true codes (accepted):

- Problem List: 4,066
- Health Plan: 8,942
- Claim/Bill: 3,401
- **Clinical Record: 28,194**
  - 56K suspects suppressed
- Multiple/Combo Source: 72,501
  - Clinical Record included in 86%

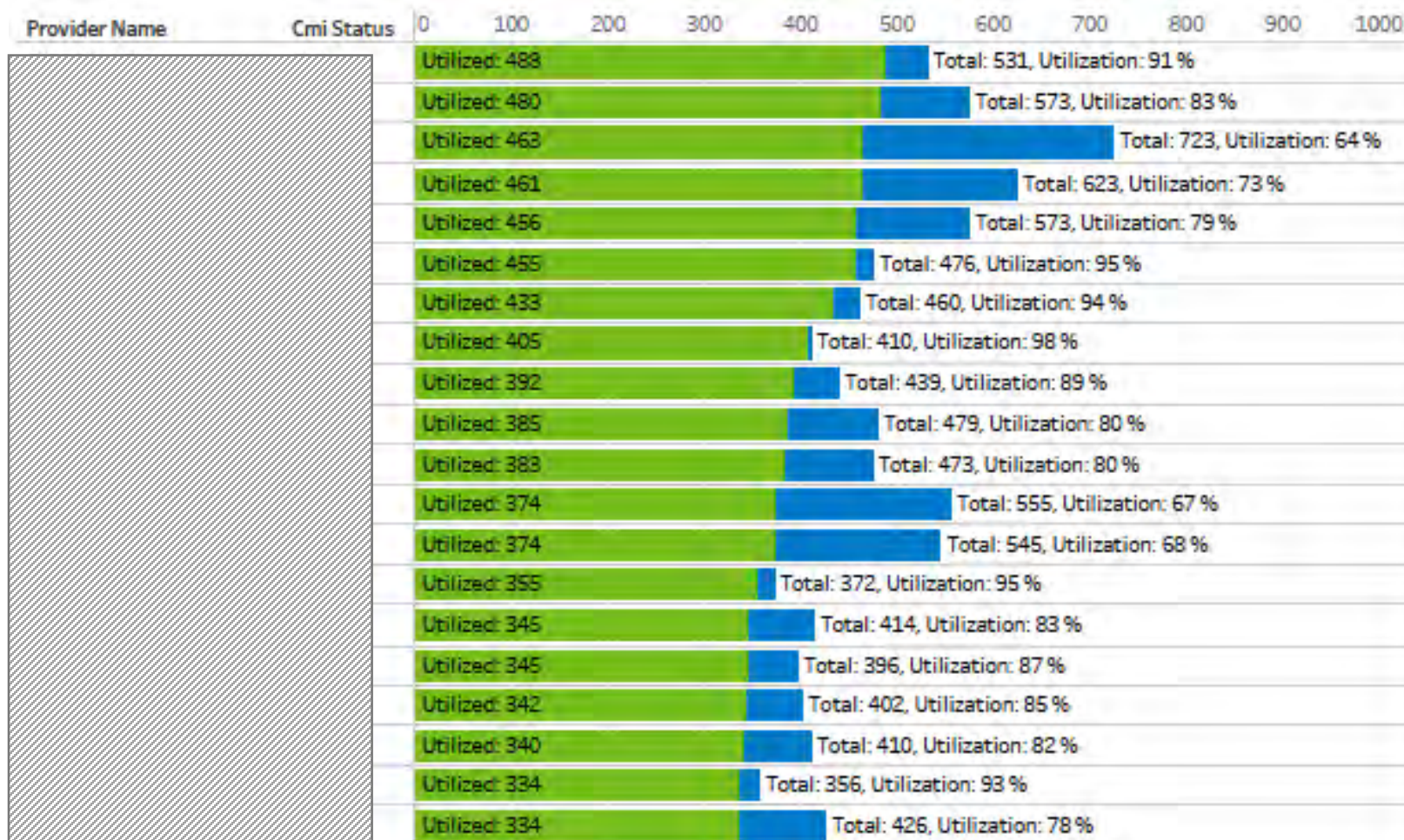


# POINT-OF-CARE OUTCOME TRENDS

## TREND 12/19 - 9/20



# INDIVIDUAL PROVIDER ADOPTION REPORTING

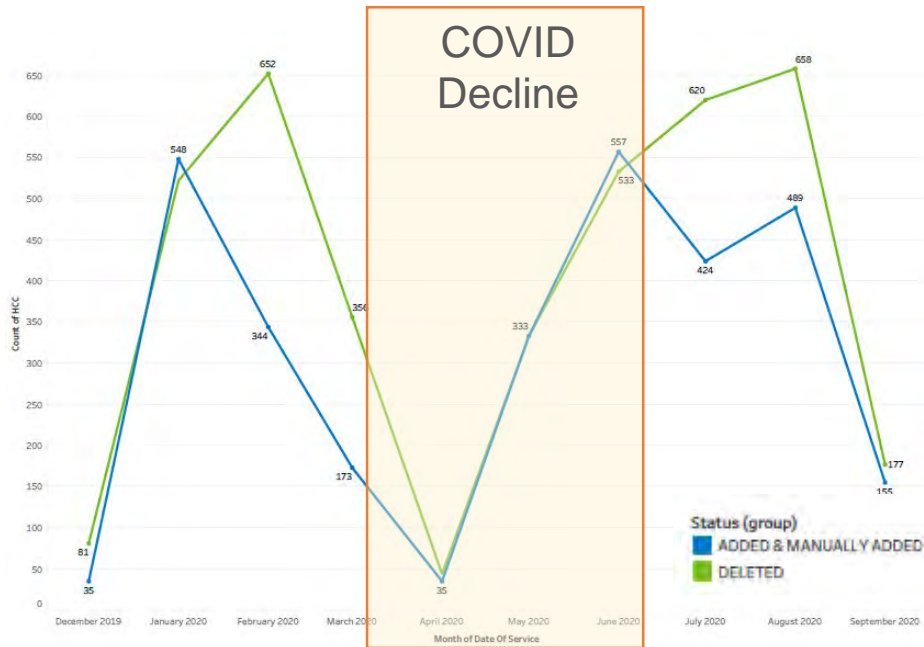


Measure Names  
■ Lumanent Utilized  
■ Encounters BPA Fired



# POST-ENCOUNTER OUTCOME TREND

## TREND 12/19 - 9/20



## CUMULATIVE 2020

### Suggested Addition

Total for Coding Dates				
Status	ACA	MA	MEDICAID	Total
ADDED	166 (15%)	2,564 (34%)	820 (24%)	3,550 (29%)
MAN ADD	69 (6%)	376 (5%)	314 (9%)	759 (6%)
REJECTED	885 (79%)	4,527 (61%)	2,351 (67%)	7,763 (64%)

### Suggested Deletion

Total for Coding Dates				
Status	ACA	MA	MEDICAID	Total
DELETED	353 (43%)	2,936 (60%)	1,188 (34%)	4,477 (48%)
KEPT	468 (57%)	1,993 (40%)	2,327 (66%)	4,788 (52%)





# TOP HCC CODE ACTIONS AT POST-ENCOUNTER

## ADDED

#	Dx	Description
1	E1122	Type 2 diabetes mellitus with diabetic chronic kidney disease
2	E119	Type 2 diabetes mellitus
3	Z794	Use of insulin
4	Z6841	BMI 40.0-44.9
5	I110	Hypertensive heart disease with heart failure
6	I4891	Unspecified atrial fibrillation
7	N183	Chronic kidney disease, stage 3
8	J449	COPD, unspec
9	I130	Hypertensive heart and CKD with heart failure
10	E1151	Type 2 diabetes mellitus with diabetic peripheral angiopathy

## DELETED

#	Dx	Description
1	E119	Type 2 diabetes mellitus
2	N183	Chronic kidney disease, stage 3
3	C61	Malignant neoplasm of prostate
4	I739	Peripheral vascular disease
5	E118	Type 2 diabetes mellitus with unspecified complications
6	J449	COPD, unspec
7	E1165	Type 2 diabetes mellitus with hyperglycemia
8	I480	Paroxysmal atrial fibrillation
9	I4891	Unspecified atrial fibrillation
10	J438	Other emphysema

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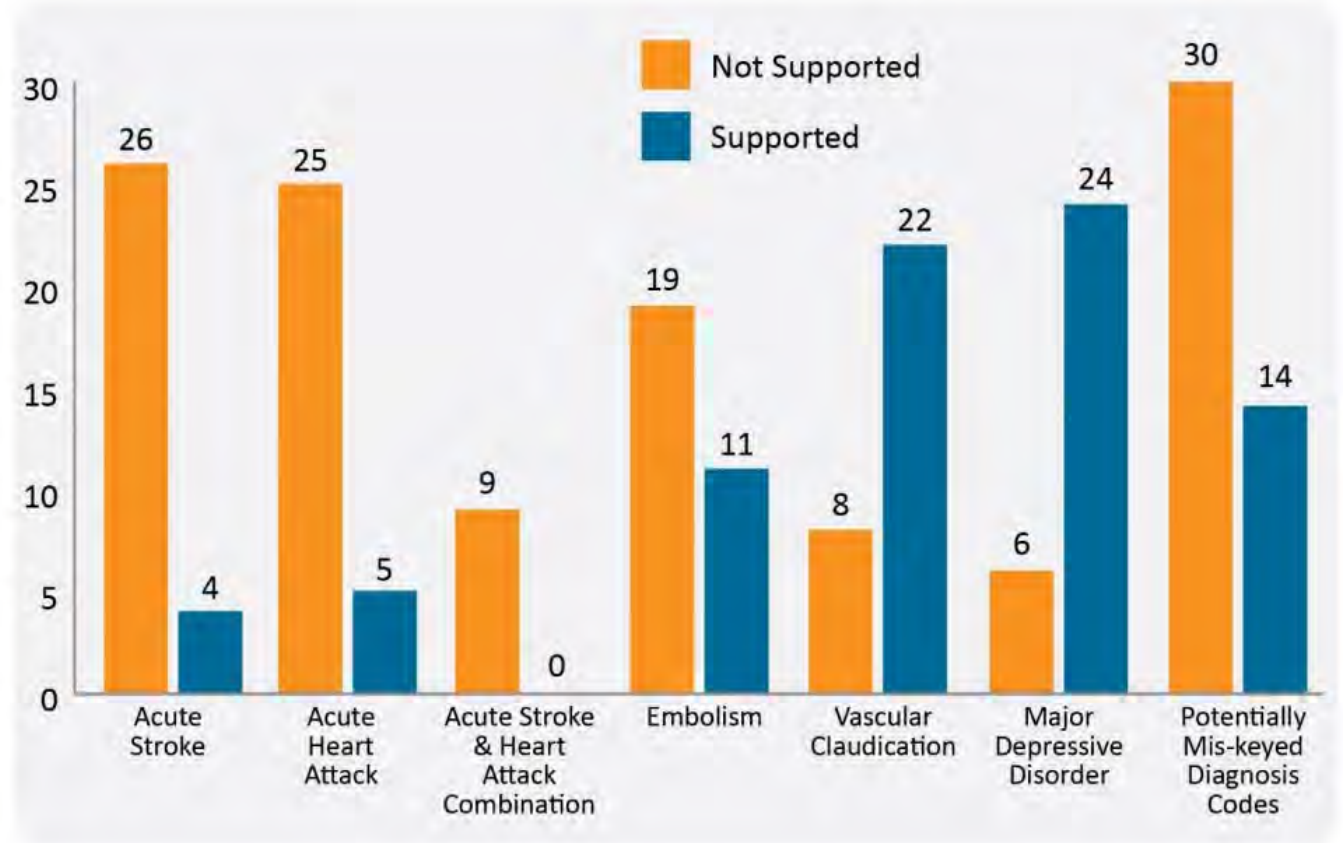
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**DATA ANALYTICS**

# ANALYTICS FOR COMPLIANCE

We all know about analytics looking for gap, but we also need to look the other way.

- OIG has been testing the use of analytics to identify non-compliant codes in small pilots.
- Based on 60% hit rate (86% for some codes), expect them to scale this analysis.



# DATA ANALYTICS TO CHASE CHARTS WITH SUSPECTED PROVIDER OVERCODING

- OIG's rules provide a good start to implementing compliance-focused chase analytics.
- Some codes with very high hit rates (acute stroke) may be filtered at the point of submission but others need to be checked and validated by coders.
- To enable this, analytics tools need to include charts containing suspected noncompliant codes when building chase lists.
- Coders need to look both ways.

## epiAnalyst Compliance Pack Stats

Condition	Suspects	Per 1000
Major Depressive HCCs	843	56
Acute Stroke HCCs	324	21
Other High Risk HCCs	709	47

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# RETROSPECTIVE REVIEWS

# USING NLP TO “LOOK BOTH WAYS”

- Traditionally, to do a legitimate two-way review, you had to code everything in the chart. This was much slower and more expensive than yearwise capture.
- NLP has sped up coding, but often by taking an "upside only" view i.e., only having coders review new codes.
- NLP can and should to “look both ways,” allowing coders to see which claims codes are in the chart to assess for overcoding, showing the results of work both upside and downside.

has lesion on left breast, would like removed, was cryo'd in the past  
has persistent rash on left foot, no relief with lotrisone

## Active Problems

1. Afib
2. CVA (cerebral vascular accident)
3. Diabetes mellitus with complication
4. Hyperlipidemia due to type 2 diabetes mellitus
5. Paroxysmal atrial fibrillation
6. Paroxysmal supraventricular tachycardia
7. Sinus node dysfunction
8. Temporal arteritis

# RETROSPECTIVE REVIEWS: ADD/DELETE OUTCOME RESULTS

	Add HCC / 100 Members	Delete HCC / 100 Members	Net HCC / 100 Members	Net RAF Impact
MA	41.6	2.6	39.0	0.107
Commercial	5.6	2.9	2.7	0.091
Medicaid (CDPS)	31.1	2.6	28.5	0.076

# CLOSING THE LOOP: IMPROVING FUTURE DOCUMENTATION

- Provider education and CDI programs can help: Include training on overcoding.
- Work from coding deletes and compliance analytics.
- Identify themes of documentation issue, grouped by provider.
- Training: Coding for Compliance 101 + provider-specific training based on their observed errors.





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# KEY TAKEAWAYS

# IMPROVING COMPLIANCE ACROSS THE RISK-ADJUSTMENT LIFECYCLE: KEY TAKEAWAYS

 **Data integrity**  
Integrity mindset: You're not trying to find new codes—you're trying to submit fully accurate documentation.

 **Responsibility**  
It takes a village. Everyone who touches the data needs to participate in ensuring documentation accuracy and has a responsibility to make sure it's accurate across the risk-adjustment lifecycle, not just the provider or plan.

 **Utilization of technology**  
We have well-known tools to make risk adjustment faster and better we just need to employ them on both sides of data integrity.

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**THANK YOU**

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**APPENDIX**

# OIG DATA SAMPLE METHODOLOGY

The design for our statistical sample comprised of six strata of enrollee-years with either:

- An acute stroke Dx (Ischemic or Unspecified Stroke) on one physician claim during the service year but without that Dx on a corresponding inpatient hospital claim.
- A Dx for acute heart attack on only one physician claim but without that Dx on a corresponding inpatient hospital claim either 60 days before or 60 days after the physician claim.
- An acute stroke Dx and a Dx that mapped to an acute heart attack HCC in the same year and met the criteria mentioned in the previous two bullets.
- A Dx that mapped to an embolism HCC but for which an anticoagulant medication was not dispensed.
- A vascular claudication Dx (which maps to HCC for Vascular Disease) but for which medication was dispensed for neurogenic claudication (715 enrollee-years).
- A major depressive disorder Dx (which maps to the HCC entitled Major Depressive, Bipolar, and Paranoid Disorders) on one claim during the service year but for which antidepressant medication was not dispensed.

Plus a search for Dx codes (ICD9 in this sample) that could have been likely mis-keyed pairs, such as 482.0 and 428.0.



# TYPES OF NLP INSIGHTS

NLP makes coding **suggestions** and finds condition **suspects**

## Suggestions

- Codes missed/**unsubstantiated** based on visit documentation/prior diagnosis.
- Suggestions reviewed by a coder for acceptance/rejection.
- Informs suspecting logic.
- Delivered at any point in the workflow.

## Suspects

- Conditions not previously diagnosed but anticipated based on clinical evidence (claims, pharmacy, diagnostic tests).
- **Requires clinical confirmation and delivered only to pre-encounter of POC.**

## Suggestion Example

Last, First J DOB: 09/17/1955 Page 1 of 7

**Office Visit** Last, First J (9/17/1955)

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<b>Last, First J</b> 10/30/2013 11:45 AM Office Visit	Dept Phone: 412-623-1111 Encounter #: 157111111	Description: 64 year old female Provider: Last, First M, MD Department: Gm Hbc
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Reason for Visit

Follow-Up	patient is here for hospital follow up
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Visit Diagnoses

Memory change - Primary	780.93
Complic Hypertension	997.91
Vaccine For Influenza	V04.81
Dysuria	788.1

Progress Notes

Last, First M, MD at 10/30/2013 8:06 PM
Status: Signed

Diagnoses coded by physician

"Missing" Diagnosis – CKD Stage 4

**HISTORY**  
64 yo female here for evaluation s/p hospital discharge for lethargy/altered mental status thought to be secondary to symptomatic hypoglycemia. She was admitted 10/24 and discharged the following day after no further hypoglycemia and improvement in her cognition. Her glimiperide was discontinued and her januvia was cut in half. **CKD stage 4 at baseline.** She had an MRI which showed no acute ischemic event. Her balance has been "off" for several months. She admittedly prior to this incident had "mixed up her pills" and may have taken more than prescribed medications. She is accompanied by her son Norman who has noted significant changes in her since her discharge. She was very independent prior to admission but when left independently or being charged with a task she becomes anxious and "shaky", her hands tremble till she "gets on the other side of it". NO difficulty with sleep, with increased anxiety symptoms she seems to get a pressure in her chest but that doesn't last long. No shortness of breath, no edema, recently has been so unsure of her gait that she is using a walker in the home. No falls, due to work with home physical therapy. No agoraphobia. Having some word finding difficulties which frustrates her. "she feels like she is losing her mind". A log of meals and corresponding blood sugars are brought in today-the average blood sugar is 140-160. On ROS-urinary frequency with dysuria at the end of the stream for the last 1 week. No instrumentation in the hospital. Also started on SL B12. She says since discharge her arms have been itchy and have had a fine pink rash.

**PMH**  
Patient Active Problem List  
Diagnosis  
• Complic Hypertension



# TYPES OF NLP INSIGHTS

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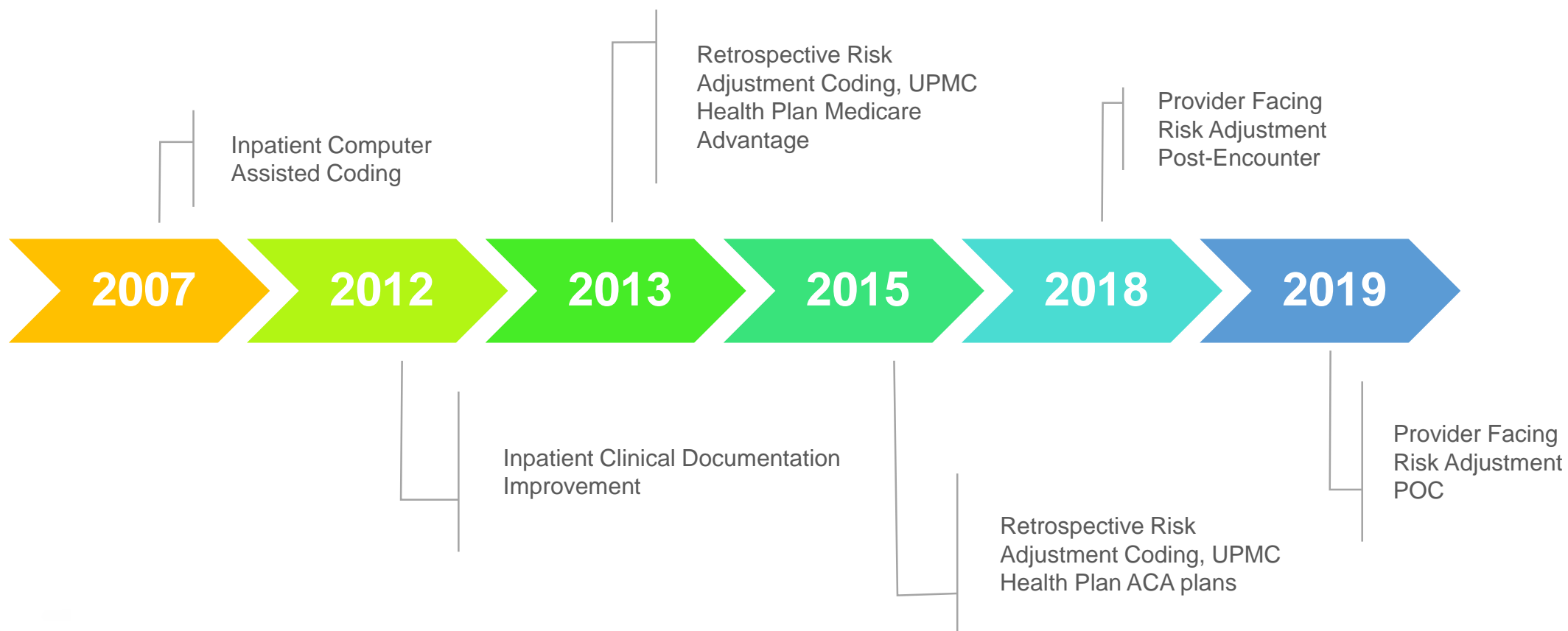
- Conditions not previously diagnosed but anticipated based on clinical evidence (claims, pharmacy, diagnostic tests).
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## Suspecting Logic

	Meaning	Example
Compound	If two or more pieces of intel are found within a single patient's data, generate a suspect based on the combination.	If a patient has diabetes (E11.9) and use of gabapentin, suspect diabetes w/neuropathy (E11.40)
Negation	Suppress/exclude a suspect if a certain intel is found.	If a patient has aortic aneurysm (I71.4) but has had a repair, do not suspect aortic aneurysm, but consider aortic atherosclerosis (I70.0)
Temporality	A time restriction for a piece of intel to be used. May be either a lookback period or a comparator between 2 pieces of intel.	If acute MI (I21.02) in prior year, then suspect old MI (I25.2)
Value Range	Suspect based on a value range	Suspect CKD stage 3 (N18.3) if a patient as a GFR lab value between 30 and 59



# UPMC'S NLP-ENABLED RISK ADJUSTMENT USAGE





# REALIZING STRONG RETURNS ON ALL LOBS



## Retrospective Review

**\$200M in additional revenue** from November 2013 - July 2018

**4X** productivity increase

**~12% of shared savings revenue** for providers

## Point-of-Care

**\$12.8M in additional revenue** from August 2018 - November 2019 for MA and MCAID (ACA numbers pending)

**12,023 codes** captured across ACA, MA, and MCAID

## Post-Encounter Review

**\$5.7M in additional revenue** from August 2018 - November 2019 for MA and MCAID (ACA numbers pending)

**7,766 codes** captured across ACA, MA, and MCAID

**12.5X ANNUAL ROI**

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# Risk Adjustment Forum