

NLP Exposed!

Your Questions Answered

Presented By:

Cheryl Mason, *Director, Terminology & Informatics* – **Wolters Kluwer, Health Language**

Melissa James CPC, CPMA, CRC, *Risk Adjustment SME, Senior Consultant* – **Wolters Kluwer, Health Language**

Michael Stearns, MD, CPC, CRC, CFPC, *Specialized Consulting Director* – **Wolters Kluwer, Health Language**

Chris Funk, *Ph. D., Medical Informaticists* – **Wolters Kluwer, Health Language**





THE RISE
ASSOCIATION

We are a network of health care professionals addressing the challenges posed by the emerging landscape of value-based care and government health care reform.

OUR MISSION

Our mission is to provide a community for like-minded professionals to come together for networking, education, and industry collaboration to stay ahead and advance their careers.

ONE ASSOCIATION
THREE COMMUNITIES



LEARN MORE AT THE [RISEHEALTH.ORG/MEMBERSHIP](https://risehealth.org/membership)

Discussion Board

[Dashboard](#) [Log out](#)

Select your community

Quality & Revenue

Search posts

SEARCH

Risk Adjustment

SEE ALL

Post

Replies

July 15, 2021 Meeting Notes: HCC Coding User Group #3
started by Tracy Anderson 10 days ago

22

Current Trends and Topics: What keeps you up at night?
started by Marina Adamsky 14 days ago

8

Strategies for RADV Audit Success with a Remote Team
started by Tim Hart 29 days ago

4

NEW POST

Quality & Stars

SEE ALL

Post

Replies

Breaking news: CMS finalizes telehealth, ESRD changes to Medicare Advantage
started by Ilene MacDonald 440 days ago

2

The impact of COVID-19 on Quality and Stars
started by Ilene MacDonald 489 days ago

12

ASK YOUR QUESTIONS IN OUR DISCUSSION BOARD

Today's Presenters

MODERATOR



Cheryl Mason

Director, Terminology & Informatics
Wolters Kluwer, Health Language

PANELISTS



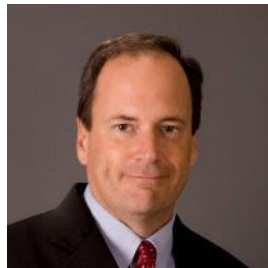
Melissa James CPC, CPMA, CRC

Risk Adjustment SME, Senior Consultant
Wolters Kluwer, Health Language



Chris Funk, PhD

Lead Data Scientist
Wolters Kluwer, Health Language



Michael Stearns, MD, CPC, CRC, CFPC

Specialized Consulting Director
Wolters Kluwer, Health Language

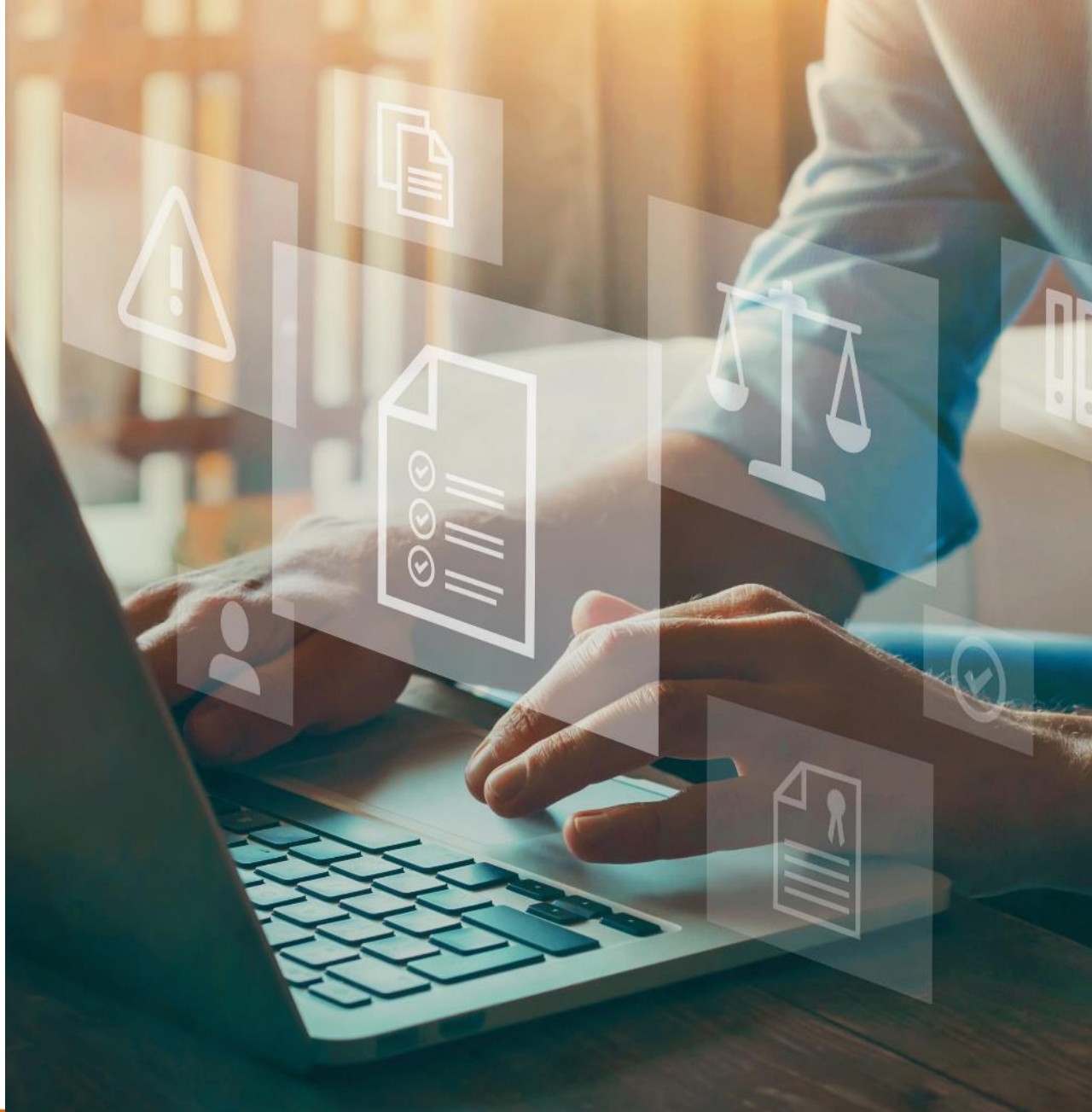
Today's Agenda

- **QUICK RECAP OF NOVEMBER WEBINAR**
 - RADV Final Rule update
 - Review Top challenges in Risk Adjustment Coding Operations
- **PANEL DISCUSSION:**
 - NLP Technology
 - Quality Clinical Indicators
 - Chart Organization
- **FUTURE OPPORTUNITIES WHEN USING THE RIGHT TECHNOLOGY**
- **Q&A**

News of the Day

- CMS Final Rule on repayment methodologies - 2/01/2023
 - Retroactivity
 - Extrapolation
 - Fee for Service Adjuster (FFSA)
- Rate and pace of RADV/OIG audits

REMEMBER: ROI is not just an increased RAF, it is also about staying out of the headlines!



Top Challenges in Risk Adjustment

Production

There is a HUGE volume of charts that need to be coded, audited and submitted to CMS

Accuracy

Accurate ICD-10 code reporting cannot be understated. The money the payer receives from CMS or is owed back to CMS is based on the ICD-10 codes reported

Analytics

The need for meaningful analytics nearly endless. It informs population health, cost prediction, areas of risk and required internal and external reporting

Physician/ Coder Education

The payor is dependent on physicians to document appropriately and the coders to accurately assign ICD-10 codes for reporting to CMS. The payor is ultimately responsible. The payor will be focused on identifying areas of opportunity for education.

NLP Extracts Valuable Insights From Unstructured Text



"...Eye exam May 2019 recommended Eylea injection for retinopathy..."

"Result panel 7/11/2019...Potassium 4.3 A1c 8.4 Creatinine 0.8..."

"...denies any CP or SOB..."

"..Last colonoscopy performed 2015 by Dr Smith..."



PROCEDURE
SNCT 36228007
Eye Exam

MEDICATION
RxNorm 1232155
Eylea

LAB
LOINC 4548-4
Hemoglobin A1c

CONDITION
SNCT 29857009
Chest Pain

CONDITION
SNCT 267036007
Dyspnea

PROCEDURE
SNCT 73761001
Colonoscopy

Traditional NLP Techniques Fail to Work in the Clinical Domain

CLINICAL SUBLANGUAGE

- Format of documents
- Grammar
- Clinical jargon
- Context:
 - *Negation*
 - *Conditional*
 - *Certainty*
 - *Temporality*
 - *Experiencer*

VARIABILITY

- Physicians
- Clinical specialties
- Organizations

EXAMPLE:

Advised if he experiences any CP, SOB w/exertion or dizziness or synco ep to let us know and we can do appropriate workup.

Pt was last seen in office, complaining of RUE numbness

Lopressor beta-block was given

Iron studies, LDH/Bili/Hapto, B12/Folate were within normal

Father had cancer, other hx of MI

Leaman R, Khare R, Lu Z. Challenges in clinical natural language processing for automated disorder normalization. J Biomed Inform. 2015;57:28–37. doi:10.1016/j.jbi.2015.07.010

Imagine Having a Doctor or Nurse Sitting Next to the Coder...

CHART TABLE OF CONTENTS

Table of Contents		✕
<input type="text" value="Search"/> <input type="submit" value="Q"/>		
Sort by: Newest First <input type="button" value="v"/>		
^ Progress Note Outpatient	02/27/2021	
• Review Of Systems		
• Social History		
• Physical Exam		
• Assessment		
• Plan		
^ Progress Note Outpatient	01/19/2021	
• History Of Present Illness		
• Review Of Systems		
• Social History		
• Physical Exam		
• Assessment Plan		
^ Progress Note Outpatient	01/03/2021	
• Review Of Systems		
• Social History		

SURFACED DIAGNOSES & CLINICAL INDICATORS

Physical Examination:

- Vitals: BP 135/90, R 13, P 80 and irregularly irregular, Weight 167 lbs., Height 5'6"
- HENT: unremarkable
- Neck: supple
- Lungs: clear to auscultation
- CVS: heart regular rhythm, no murmurs. Mild ankle edema. Pedal pulses 1+ bilaterally
- Abdomen: soft
- Musculoskeletal: Normal strength and gait
- Neurological: oriented times three, normal speech, no weakness in extremities, monofilament foot sensation test notable for decreased sensation on the left.

Assessment

- Hypertension: better controlled on current regimen
- Diabetes control improving with better adherence to diet.
- Paroxysmal atrial fibrillation now on Xarelto and Tikosyn (Dofetilide) due to elevated stroke risk. Managed by cardiology.
- Type 2 diabetes mellitus with diabetic chronic kidney disease
- Chronic kidney disease, stage 3b. eGFR remains stable. Will optimize treatment for DM and HTN.
- Diabetic polyneuropathy, mild
- Lupus erythematosus, no active disease. Will repeat ESR in two months.

Plan

- Continue current medications
- Follow-up with cardiology for management of atrial fibrillation and anticoagulation.
- Emphasize need for strict adherence to ADA diet
- Referral to podiatry to prevent potential skin lesions
- Return to clinic in 4 weeks or as needed
- Neurology referral

PRE-POPULATED DIAGNOSIS CARD

Paroxysmal atrial fibrillation

ICD-10 Code *

148.0 Paroxysmal atrial fibrillation

[Refine](#) [Guidelines](#)

Note Type	Encounter Date	
Progress Note Outpatie...	02/27/2021	<input type="button" value="📅"/>

Provider Type

e.g. Physician

Provider

Richard Rodriguez, MD [Signature](#)

Supporting Documentation

Recommended

- MedicationStatement: Xarelto
- MedicationStatement: Tikosyn
- Condition: irregular heartbeats
- MedicationStatement: Xarelto
- MedicationStatement: Tikosyn
- Condition: irregularly irregular
- MedicationStatement: Xarelto
- MedicationStatement: Tikosyn

True Value is Realized Through Combining Everything Together...a Complete Ensemble

SIMPLE CLINICAL RULE:

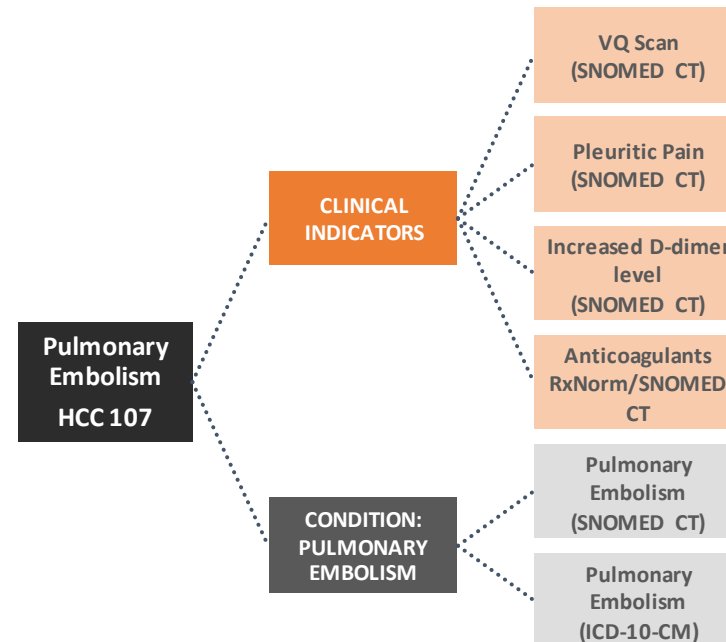
IF The dx of Pulmonary Embolism is found in the Assessment and plan **AND** two clinical Indicators from Pulmonary Embolism High Confidence are present
THEN Suggest ICD-10 Code I26.99

TERMINOLOGY DECISIONS

TERMINOLOGY	ADVANTAGES	CHALLENGES	UPDATE FREQUENCY & VOLUME
Hierarchical Condition Categories	ICD -10-CM definitions of condition categories	Categories are very broad	Semi-annually
SNOMED CT	Rich library of clinical terms with true synonymy	Multi-axial hierarchy	Semi-annually* 4,000 new codes
NCIT	Complex clinical ideas in a single concept	Focused terminology	Quarterly avg 2000 new codes
ICD-10-CM	Risk Adjustment driven by ICD-10-CM	ICD-10-CM verbiage not used in clinical documentation	Annually 1400 new codes
RxNorm	Comprehensive library of medication terms	Limited scope	Monthly avg 200-250 new codes
CMS CQM	Predefined clinical concepts with reusability	Update frequency/ limited scope	Annually

* Monthly as of 2022 with 700-1000 new codes

CLINICAL VALUE SETS



ML MODELS



Opportunities for the Future

Exciting things are right around the corner!

COMING MARCH 1ST!

**Interested in learning how
Health Language is disrupting
risk adjustment?**

Reach out today – we'll give you a
sneak peak of our Coder Workbench!



Wolters Kluwer, Health Language
is a gold sponsor of the upcoming
RISE National 2023 Conference!

March 6-8 | Colorado Springs, CO

Q&A

Please reach out, we'd love to connect with you!



Cheryl Mason

Director, Terminology & Informatics
Wolters Kluwer, Health Language
Cheryl.Mason@WoltersKluwer.com



Melissa James CPC, CPMA, CRC

Risk Adjustment SME, Senior Consultant
Wolters Kluwer, Health Language
Melissa.James@WoltersKluwer.com



Michael Stearns, MD, CPC, CRC, CFPC

Specialized Consulting Director
Wolters Kluwer, Health Language
Michael.Stearns@WoltersKluwer.com



Chris Funk, PhD

Lead Data Scientist
Wolters Kluwer, Health Language
Chris.Funk@WoltersKluwer.com

THANK YOU!

For more information on Health Language Expert Solutions, visit our website & reach out today!



RISE



Wolters Kluwer