

NLP-enabled Workflow for Capturing Risk Factors Following Patient Encounters

Key benefits:

- **Improve risk capture** by leveraging NLP to quickly identify documented diagnoses across all available data
- **Optimize ROI** by prioritizing highest value encounters to be reviewed by the coder
- **Review more encounters** with the assistance of technology-powered workflow
- **Ensure compliance** with coding guidelines by facilitating easy audit of claimed diagnoses
- **Standardize risk capture process** across all populations through a single workflow
- **Shift the burden of coding** from physicians back to support staff

The Lumanent™ provider workflow is a technology-enabled solution that leverages natural language processing (NLP) to simplify the risk capture process for risk-bearing providers.

Through the Lumanent risk capture workflow, providers are able to engage members of the care team before, during, and after the patient encounter via separate application modules. Each of the modules can be used individually, to optimize specific processes, or in conjunction with other modules for a more holistic approach.

The Lumanent Post-Encounter Review module ensures that missing diagnoses and incomplete documentation are corrected prior to the claim submission. It is designed for administrative staff (i.e., coding or billing staff) at physician practices to efficiently and effectively lift the burden of coding from physicians. Post-Encounter Review standardizes the risk capture process across all patient populations (ACA, MA, Medicare ACO, Medicaid) and provides a streamlined approach to managing all value- and risk-based contracts through one workflow.

In the module, an NLP-generated, prioritized, individually customizable work queue is created for coders to review recently completed encounters. Upon review of the encounter documentation and the billed diagnoses, the reviewer can add and remove additional diagnoses to or from the bill prior to submission. For instances of incomplete documentation, the coder can initiate a query to the physician for additional information to verify the diagnosis. Analytics are also available for performance measurement, physician feedback, and operational resource tracking. Collectively, this approach ensures that risk capture opportunities are fully addressed prior to submission.

“Developing an accurate portrayal of our patient population’s disease burden is a key organizational goal for our health system. We were looking for tools to standardize risk capture across our patient population and do so without burdening our physicians and clinical staff.”

Dr. Francis Solano, President, Community Medicine Inc. at UPMC

Lumanent Post-Encounter Review

Close Encounter

Encounter Worklist | Next Encounter | Haskins, Fannie, Gender: F, DOB: 04/12/1946, Encounter ID: 8967452, Provider: Family..., Encounter Date: 07/23/2017

07/23/2017 chronic condition note .document Summary

PAST MEDICAL HISTORY: Significant for:

1. Anxiety disorder
2. Hypertension
3. Colon polyps
4. Degenerative disk disease
5. Type 2 diabetes
6. Fibromyalgia
7. Hyperlipidemia
8. Hypothyroidism, which patient continues to manage with Synthroid
9. Parotid mass, which is noted to be benign
10. MGUS
11. Refractory anemia, for which he is currently taking Pitressin
12. Renal stones
13. Restrictive lung disease
14. Vitamin D deficiency
15. Iron deficiency

CURRENT MEDICATIONS: The patient has diabetes. The patient is on gabapentin. Xanax 0.5 mg 3 times a day as needed for anxiety, aspirin daily, Pulmicort nebulizer twice a day, Clobetasol as needed, folic acid daily, Glucotrol XL 10 mg daily, Norco as needed for pain, prednisone 5 mg daily, DuoNeb as needed, Synthroid 125 mcg daily, Lisinopril 5 mg daily, Antivert as needed, Metformin XR 500 mg twice a day, CellCept, he takes 500 mg 2 tablets daily, Nystatin powder as needed. Recently also completed a course of prednisone at higher doses for about of acute bronchitis. 500mg Lanthanum carbonate (Fosrenol) and Sucroferic oxyhydroxide daily. (Velphoro. Also takes Pitressin 25 mg once a week and 10mg Diazepam (Valium) twice daily.

REVIEW OF SYSTEMS: Headaches, blurry vision, chest pains, shortness of breath. Cough is not resolved. Diarrhea. Weakness, fatigue and dizziness as noted in the HPI. Continues to have urinary urgency. Distention of jugular vein. Evidence of neuropathy

ASSESSMENTS:

1. CXR findings show pulmonary vascular congestion. BNP is 600. Lung exam reveals

Billed Diagnoses

ICD-10	HCC	Rr	Description	Remove
A318	16	152	Pulmonary mycobacterial ...	Remove
E119	19	31	Type 2 diabetes mellitus with ...	Remove
F1121	19	31	Opioid dependence, in remi ...	Remove
Z992	134	261	Dependence on renal dialysis	Remove

Suggested Additions

ICD-10	HCC	Rr	Description	Add to Bill	Reject
G629	9	31	Polynuropathy, unspecified	Add to Bill	Reject
I502	6	5	Unspecified systolic (congestive) heart ...	Add to Bill	Reject
K766	--	187	Portal hypertension	Add to Bill	Reject

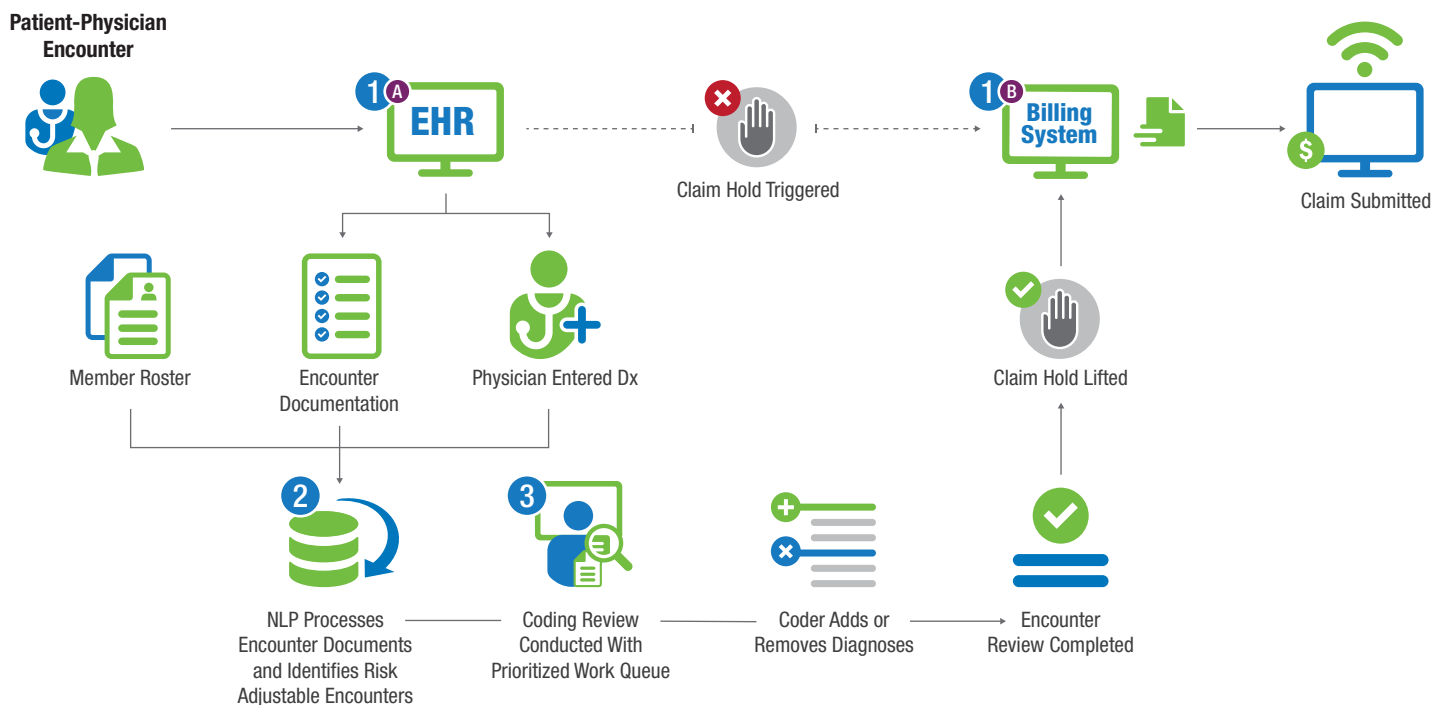
Suggested Deletions

Rejected Diagnoses

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Lumanent Post-Encounter Review Workflow



Lumanent Post-Encounter Review's Key Functions

1 Integrations and Customizations

- A** EHR Agnostic Integration – EHR data transfer through all supported file formats (HL7/CCDA/Flat File) for all major EHR systems
- B** Claim Hold and Release – Automatic claim hold and release following completed encounter review to ensure timely billing

2 Embedded Workflow Intelligence

- Automated Filtering – Risk adjustable encounters automatically identified, and consolidated (encounters with opportunity and risk are synced to minimize the number of encounters to be reviewed), and routed to the reviewer based on patient visit data
- Prioritized Work Queue – NLP-generated opportunity and risk worklists displayed by encounter date and likelihood of incremental gap closure
- Multiple HCC Model and RxHCC Support – Supports all relevant HCC models with automatic application of correct model based on patient population eligibility.

3 Coder Workflow Interface

- Opportunity Worklist – Identification of diagnoses that are not present on the bill but supporting evidence is present within current visit documentation
- Risk Worklist – Identification of diagnoses that are present on the bill but may lack supporting evidence within current visit documents
- Coder Activity Panel – Presents NLP-generated code suggestions and substantiating evidence that can be accepted or rejected by the coder for the current visit; specific coders can have individualized priorities based on LOB, likelihood of incremental gap, date of service, etc.
- Interactive Highlighting – Keyword highlighting for easy navigation of evidence to support suggested diagnoses