

NLP-enabled Workflow for Capturing Risk Factors Following Patient Encounters

Key benefits:

- **Improve risk capture** by leveraging NLP to quickly identify all supported 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. 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

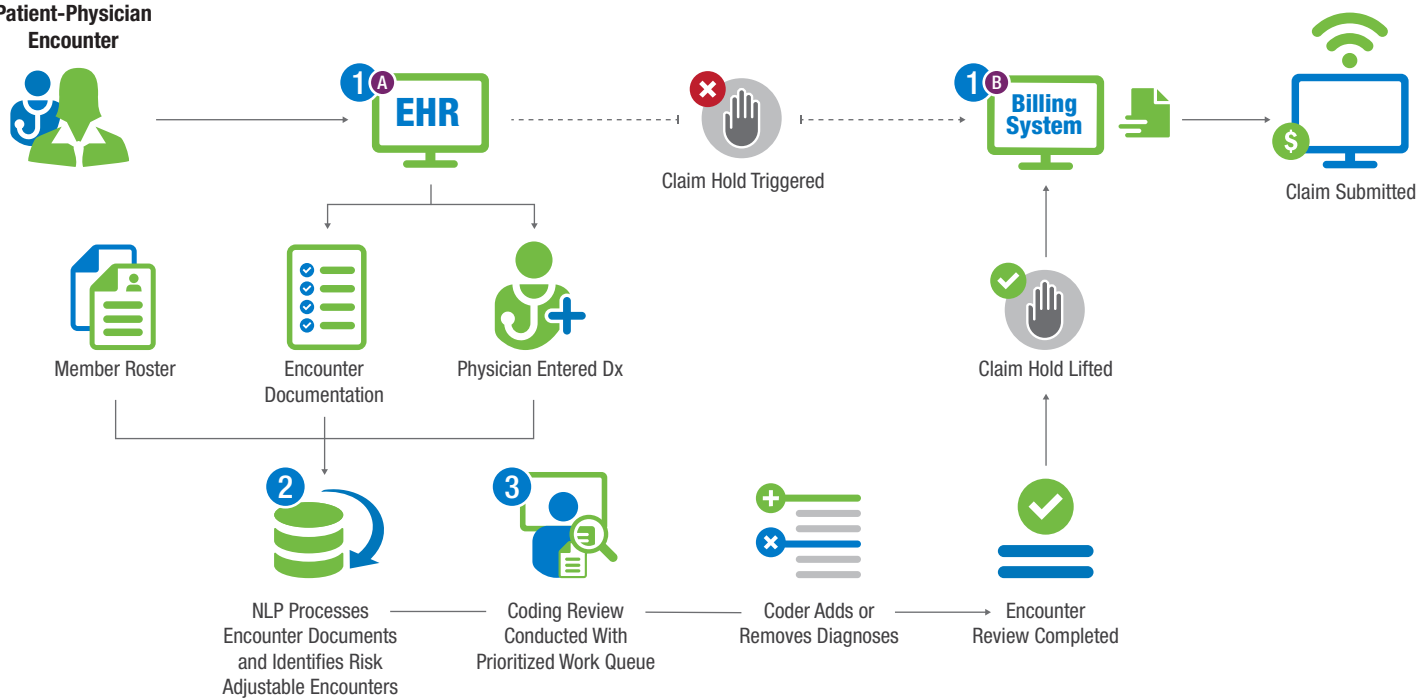
The screenshot displays the Lumanent Post-Encounter Review interface. At the top, it shows the patient's name (Haskins, Fannie), gender (F), date of birth (04/12/1946), encounter ID (8957452), provider (Family...), and encounter date (07/23/2017). The main content area is divided into several sections:

- PAST MEDICAL HISTORY: Significant for:** A list of 15 conditions, with 'Type 2 diabetes' highlighted in blue.
- CURRENT MEDICATIONS:** A detailed list of the patient's medications, including Xanax, Clobetasol, folic acid, Glucotrol XL, Norco, Lisinopril, Antivert, Metformin XR, CellCept, Nystatin powder, Lanthanum carbonate, and Valproic acid.
- REVIEW OF SYSTEMS:** A summary of the patient's symptoms, such as headaches, blurry vision, chest pains, and shortness of breath.
- ASSESSMENTS:** A list of findings from the patient's exams, including CXR findings showing pulmonary vascular congestion and an elevated BNP.
- Billed Diagnoses:** A table listing current billed diagnoses with columns for ICD-10, ICD, ICD, and Description. Diagnoses include Pulmonary mycobacterial infection, Type 2 diabetes mellitus with complications, Opioid dependence, and Dependence on renal dialysis.
- Suggested Additions:** A table listing suggested diagnoses to be added to the bill, such as Polyneuropathy, unspecified, Unspecified systolic (congestive) heart failure, and Partial hypertension.
- Suggested Deletions:** A section for diagnoses to be removed from the bill.
- Rejected Diagnoses:** A section for diagnoses that have been rejected.

The interface includes navigation buttons like 'Close Encounter', 'Add Diagnosis', and 'Submit Bill'.

Lumanent Post-Encounter Review Workflow

Patient-Physician Encounter



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, consolidated, 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