White Paper

EMEDLOGIX's promise is a high recall rate by way of Automating Accuracy, Improving Efficiency in its breakthrough Deep Learning Model with Computer Assisted Coding (CAC) – Let's reshape healthcare

Computer-Assisted Coding (CAC) is revolutionizing healthcare by leveraging advanced technologies like Natural Language Processing (NLP) and deep learning to

transform medical coding, including Hierarchical Condition Category (HCC) coding. CAC systems, such as **Emedlogix's NLP**, analyse clinical documentation to automatically extract accurate medical codes, speeding up the coding process while reducing human errors. As healthcare shifts towards value-based care, precise coding becomes critical for risk adjustment and proper resource/budget allocation. CAC tools not only enhance coder productivity and compliance with evolving guidelines but also help healthcare organizations navigate workforce shortages and rising costs. By adopting Al-driven solutions, healthcare providers can optimize revenue cycle management (RCM) and ensure sustainability and efficiency in an increasingly complex environment.

EMEDLOGIX's Al-driven medical coding model is designed for rapid deployment, using pre-trained



models specific to healthcare. These models are ready to be implemented immediately, speeding up the transition to production while ensuring accurate and efficient coding. The system leverages neural networks and automated AI to fine-tune parameters, focusing on accurately identifying medical terms.

EMEDLOGIX's model incorporates the following key components.

- Data Ingestion: Efficiently integrates diverse data types for coding.
- **Medical Term Recognition:** Deep Learning & Rules Based Engine Enhances the identification of key medical terms from the medical record.
- **Custom Classification and Extraction:** Accurately extracts complex hierarchical medical terms and converts them to appropriate ICD code(s) from facility specific documents.
- Code Assignment and Ranking: Finalizes the list of codes by applying coding guidelines.
- **Feedback Loop:** Continuous updates from clinicians and experts to adapt to new medical terminology and coding standards.
- Custom Workflow: Coordinates and manages the coding process for optimal efficiency.



Overview of Emedlogix NLP Tool

Emedlogix NLP is an innovative Computer-Assisted Coding (CAC) solution, meticulously crafted to revolutionize the medical coding landscape. By harnessing advanced **Natural Language Processing (NLP), Artificial Intelligence (AI), and a comprehensive rules engine with 800K+ rules**, Emedlogix's NLP automates the extraction and coding of diagnostic information from medical records, delivering exceptional accuracy and efficiency.

The product demonstrates a **recall rate exceeding 95%,** a **precision rate over 85%,** and an overall **accuracy of 82%.** Additionally, it seamlessly **processes electronic health records (EHR's) at a rate of 5 images per second**.

The tool's capabilities extend beyond mere automation; it is built to understand complex medical terminologies, capture preventive care measures, and adapt to frequent changes in healthcare guidelines. This adaptability ensures that healthcare organizations remain compliant with evolving standards while optimizing their risk adjustment coding processes.

Key Benefits for Healthcare Organizations

Emedlogix NLP offers significant benefits for healthcare organizations, especially in risk-based payment structures followed by MA plans, VBC, ACO and IPA players. The tool's customization options allow it to be tailored to the specific needs of each client, whether it's adapting to different versions of risk adjustment models like V24 and V28 or adjusting to client-specific coding guidelines. This level of flexibility ensures that **Emedlogix NLP** can seamlessly integrate into existing workflows, providing a smooth transition and immediate improvements in coding accuracy and productivity.



Process Over 10 million Pages Monthly

⊒



RULES

ENGINE



Summary of Recent Enhancements and Achievements

Significant upgrades enhance **Emedlogix NLP's** accuracy and adaptability in healthcare.

- Rules engine updated frequently, delivering greater precision in coding complex medical records.
- Support for V24 and V28 models, as well as codes from 2016 records, ensures compliance with the latest risk adjustment methodologies.
- Tool adapts to frequent coding guideline updates, reducing administrative burdens.
- Enhanced security features, including multi-factor authentication and advanced encryption, ensure HIPAA compliance.

Emedlogix NLP: Features and Capabilities

Proprietary Technology: How Emedlogix Stands Out

Emedlogix NLP leverages proprietary algorithms and an extensive in-house medical terminology database to deliver unmatched coding accuracy. The tool's ability to customize and adapt to specific client needs sets it apart from competitors.

Precision Rate and Product Accuracy: Achieving 95% Code Capture

The Emedlogix NLP tool consistently delivers a **95% code capture rate**, with a **precision rate of 86%** and a **product accuracy of 82%**. Precision measures the accuracy of identified codes, while product accuracy reflects the overall effectiveness of the tool. These metrics are crucial for minimizing errors and ensuring that all relevant codes are correctly captured, reducing the risk of revenue loss and compliance issues.

Standard Measures of NLP Accuracy

Precision : Assesses the proportion of correct	PRECISION	RECALL	Re pr
results out of all	Fewer	Very few	re
identified results. Higher	false	false	cc
precision indicates fewer	Positive	Negatives	re
false positive		-	fa
	<14%	<5%	cc

Recall: Evaluates the proportion of correct results out of all possible correct results. Higher recall indicates fewer false negatives (missed codes).



Efficient Updates





High Recall Rate: Ensuring Comprehensive Code Identification

With a recall rate of almost 96%, Emedlogix NLP ensures that all applicable codes are captured, even in complex cases. High recall is essential for identifying every relevant code, enhancing the overall accuracy of the coding process.

Processing Speed

Emedlogix NLP processes @5 images per second, offering fast and efficient performance that keeps up with high-volume coding demands.

Flexibility in Customization: Tailoring Solutions for Each Client

- Customizable rules engine to accommodate specific coding guidelines.
- Ability to integrate with existing EHR systems and workflows.
- Tailored solutions for different healthcare models, including VBC, ACOs, and IPAs.



V24 and V28 Model Transition: Seamlessly Adapting to Industry Standards

Emedlogix NLP has successfully transitioned to the V28 coding model, ensuring that clients remain compliant with the latest industry standards. The tool's adaptability allows for seamless updates to accommodate future changes.

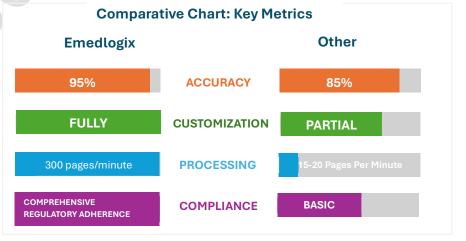
Adaptation to Frequent Changes in Coding Guidelines

- Regular updates to reflect the latest coding guidelines and regulatory changes.
- Automated processes to incorporate new codes and rules.
- Continuous improvement through AI/ML feedback loops.

Comparative Analysis: Emedlogix vs. Competitors

Unique Selling Points of Emedlogix NLP

Emedlogix NLP stands out in the market due to its superior accuracy, customization capabilities, and seamless integration with existing systems. Unlike other CAC tools, Emedlogix offers a fully customizable rules engine



and a proven track record of adapting to the latest coding standards.

Operational Efficiency and Scalability

EMEDLOGIX

Charts Processed: Volume Handling and Speed

Emedlogix NLP is capable of processing over 10 million pages per month, making it one of the most scalable solutions available. Its speed and accuracy ensure that even the largest healthcare organizations can rely on it for efficient coding.

Scalability: Processing Over 10 million Pages Per Month

- Handles high volumes of data without compromising on accuracy.
- Scalable infrastructure to support growing healthcare organizations.
- Proven track record of processing large datasets efficiently.

Workflow Optimization: Boosting Productivity by 5x

- Automated workflows and internal code search reduce the time coders spend on manual tasks.
- Integrated dashboard for real-time monitoring and management.
- Multilevel auditing ensures that coding is both accurate and efficient.

Regulatory Compliance and Security

Adherence to HIPAA, ISO 27001, and Other Standards

Emedlogix NLP is fully compliant with industry regulations, including HIPAA and ISO 27001. This ensures that all patient data is handled securely and that the tool meets the highest standards for privacy and data protection.

Security Measures: Encryption, Multi-Factor Authentication, Role-Based Access

- Encryption: All data is encrypted both in transit and at rest.
- Multi-Factor Authentication: Enhances security by requiring multiple forms of verification.
- Role-Based Access: Restricts access to sensitive information based on user roles.

Ensuring Compliance with Changing Healthcare Regulations

- Continuous updates to ensure compliance with new regulations.
- Comprehensive audit trails to document coding decisions and support regulatory reviews.
- Regular security assessments to protect against emerging threats.







The Future of Healthcare with Emedlogix NLP

Emedlogix NLP is at the forefront of healthcare technology, offering a solution that not only meets the current needs of healthcare providers but also anticipates future challenges. By automating the coding process, Emedlogix NLP ensures that healthcare organizations can focus on what matters most: improving patient outcomes.

How Emedlogix NLP Supports Value-Based Care and Improved Patient Outcomes

- Ensures accurate risk adjustment coding, leading to fair compensation for healthcare providers.
- Supports preventive care by accurately capturing patient's historical and current diagnostic conditions.
- Enhances patient care by reducing errors and improving the accuracy of medical coding.

Invitation to Partner with Emedlogix for Enhanced Healthcare Management

- Experience the benefits of advanced NLP technology in your healthcare operations.
- Join leading healthcare organizations that have transformed their coding processes with Emedlogix NLP.
- Contact us today to learn how Emedlogix can support your organization's goals.

www.emedlogix.com | info@emedlogix.com