xPatterns C.A.C. Benefits

- Automatically generates ICD-9, ICD-10, CPT and HCPCS codes directly from Clinical Encounter Notes
- Detects under-coding, over-coding, and miscoding
- Delivers higher coding accuracy and improved billing
- Enables faster coding turnaround time
- Reduces A/R outstanding days
- Lowers denials and reduces claim rework
- Improves coder efficiency and supports more time for patient care
- Includes a variety of workflows
- Learns your coding best practices through feedback
- Gets better over time
- Provides for audit of historical records
- Produces a variety of analytics including organizational trends and coder performance
- Reduces per-patient coding costs
- Results in higher revenues and more cash-on-hand

xPatterns Computer-Assisted Coding: The Future of Coding is Now

xPatterns Computer-Assisted Coding (C.A.C.) was created by Atigeo to improve how medical records are analyzed, resulting in greater medical coding accuracy and improved revenue capture for healthcare organizations.

Using state-of-the-art natural language processing (NLP) and proprietary smart pattern matching technologies, xPatterns C.A.C. automatically generates ICD-9, ICD-10, CPT and HCPCS codes directly from Clinical Encounter Notes—physician notes, lab results, discharge records, and more. xPatterns C.A.C. detects under-coding, over-coding, and miscoding while offering a complete coding workflow from physician notes to an accurate, audit-ready claim.

The audit application of xPatterns C.A.C. analyzes historical hospital records, highlighting instances where higher DRG values would be justified. Financial managers can view coding productivity, coding audit reports and other billing measures on the dashboard in real time. With xPatterns C.A.C., coders act as validators, examining recommended codes to confirm or adjust as needed.

Leveraging a combination of innovative inferencing and machine learning algorithms, xPatterns C.A.C. learns an organization's coding best practices as it processes encounter notes, using feedback to optimize coding.

The xPatterns C.A.C. Product Suite

Atigeo offers a suite of xPatterns C.A.C. products, with two functionalities at the core of each variant:

- **Medical Concept Extraction**: Using natural language processing and pattern matching technologies to analyze encounter notes and identify actionable medical terms or concepts.
- **Medical Coding Inference**: Generating the appropriate clinical, grouping, compliance, and reimbursement codes from those terms.

The cloud-based, interactive C.A.C. web application is optimized for three distinct encounter scenarios, with the Medical Coding Inference adapted to surface appropriate codes for each:

- **xPatterns C.A.C. for Hospital Inpatient**
- **xPatterns C.A.C. for Hospital Outpatient**
- **xPatterns C.A.C. for Physician's Office**

Other products offered as part of the suite include:

- **xPatterns C.A.C. for Audit**
- **xPatterns Web Services for Medical Concept Extraction**
- **xPatterns Web Services for Medical Coding Inference**

Streamlined Workflow

- Workflow orchestration for collaboration between doctors, administrators and coders, etc.

- No switching between Clinical Encounter Note and Code screens

- Visual and color cues for easy comprehension

- Codes generated automatically for review by coder with workflows for validation/ modification

Intelligent Analytics

- Dashboards and Reports

- Insight into revenue forecasts

- Analysis of use of Diagnostic, Procedural and E&M Codes

Improved Accuracy

- Baseline system provides highest levels of code generation accuracy

- Coders provided with easy-to-use interface for validation and modification of generated codes

- Adaptive system provides for learning through feedback

Designed by Coders for Coders

xPatterns C.A.C. workflow automation is intended to minimize the amount of data entry work for coders. It features a workflow map, and color-codes the remaining steps to completing the coding process. All functions required by coders are available within one key click.

Two-Stage Intelligent Analysis

xPatterns C.A.C. enables a highly accurate two-stage coding process. The first is Medical Concept Extraction, which uses proprietary natural language processing to ingest the unstructured data in Clinical Encounter Notes and identify relevant medical terms. The second stage, Medical Coding Inference, analyzes these terms to determine the most appropriate billing codes. These accurately-coded, compliant and audit-ready claims translate into more timely reimbursement and higher-yield revenue capture.

Ensuring Coding Quality and Accuracy

The recommended codes xPatterns C.A.C. generates are based on ICD-9, ICD-10, CPT and HCPCS guidelines, plus other important sources including NCCI edits, as well as OCE, MCE and MUE. The system can learn from experienced coders by extracting codes from prior encounter note records and making recommendations when similar diagnoses and CPT patterns are detected. The system also provides justification terms for the recommended codes in a single screen.

Learning and Feedback

xPatterns C.A.C. can learn from other coders and recently-acquired encounter notes and codes. As a result, it grows more accurate over time. It can detect under-coding, over-coding and miscoding and provide such improvements to coders in sub-second response time. When a coder makes a correction, the system learns that pattern and applies the newly-acquired learning to future encounter note coding. Hospitals can add and configure their own unique set of coding and grouping rules.

Best Practices for HIPAA Compliance

xPatterns C.A.C. encrypts Personal Health Information (PHI) while data is at rest or in transit. User access is controlled through multi-stage security checks including authentication and domain access controls.

Cloud-based Web Services

Offered as a cloud solution, xPatterns C.A.C. can be installed and configured in less than two weeks, reducing upfront capital expense, cost of ownership, and impact on IT resources.