

## ***Computer Assisted Coding (CAC) Improves Quality of Healthcare Delivery -- Markets Reach \$2.7 Billion By 2014***

LEXINGTON, Massachusetts (August 11, 2008) – WinterGreen Research announces that it has a new study on Computer Assisted Coding (CAC) markets. The 2008 study has 327 pages, 110 tables and figures. CAC systems are poised for significant growth as people move to purchase automated coding systems able to initiate new applications for linking particular patient diagnostic conditions and therapeutic response to best practice data.

CAC systems are implemented with natural language pattern recognition in order to assign appropriate billing codes based on the language and the context in which those patterns of language occur. Properly designed natural language processing (NLP) solutions do not require physicians to change the way they work. They can dictate in a free-flowing fashion, consistent with the way they think, and are not limited to structured inputs that may or may not fully capture the unique circumstances of each patient encounter.

Matching codes generated from physician notes to standard treatment protocols promises to improve health care delivery. According to Susan Eustis, principal author of the study, “Accompanying physician patient management with links to best practice for a particular condition, promises to revolutionize health care delivery. The ability to further check as to whether the recommendations for follow up made by radiologists and matching the commendations with the actual follow up heralds’ significant promise of vastly improved health care delivery.”

Computer assisted coding applications depend on the development of production quality natural language processing (NLP)-based computer assisted coding applications. This requires a process-driven approach to software development and quality assurance.

A well-defined software engineering process consists of requirements analysis, preliminary design, detailed design, implementation, unit testing, system testing and deployment. NLP complex technology defines the key features of a computer assisted coding (CAC) application.



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Automation of process will revolutionize health care delivery. In addition to automating the insurance, billing, and transaction systems, streamlined care delivery is an added benefit. The ability to look at workflow and compare actual care to best practice is fundamental to automated business process.

The ability to link diagnostic patient information to treatment regimes and drug prescriptions is central to improving medical care delivery. Once a physician can see what conditions need to be followed, and see that appropriate care has been prescribed 100% of the time, care delivery improves dramatically. Diagnosis of conditions using radiology frequently results in detection of events that need follow-up.

Emergency department visits rose 20 percent in 2008, while the number of available emergency centers fell by 15 percent. A study from the American Hospital Association indicated that 62 percent of hospitals feel they are at or over operating capacity.

That number jumps to 90 percent when considering Level 1 Trauma Centers and larger (300+ beds) hospitals. According to a report from the General Accounting Office, two-thirds of EDs diverted ambulances. CAC promises to provide more efficient care delivery, alleviating this situation in an immediate and dramatic manner.

The number of procedures that use computer assisted coding CAC is set to increase rapidly as the technology becomes more accurate. The trials have been completed successfully. The systems automate a tedious process and create efficient operation in the hospital and physician office environment. In this manner the automation that has been used by banks and manufacturing operations for years is moving to healthcare.

Whereas the healthcare systems have struggled with a payment and collections system that takes 30% of revenue, the banking and financial services industry has been able to run with automated billing systems that take 3% of revenue. As these economies of scale and technology are adapted to the healthcare delivery organizations through computer assisted coding, the most efficient organizations will acquire the less efficient ones.



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Computer assisted coding fits seamlessly into a healthcare work flow. An unstructured digitized text from any source. Input can come from transcription services, voice recognition output, and typed note. No templates are needed.

Computer assisted coding structures the note and applies appropriate codes. Computer assisted coding checks 100% of the notes and sends information to the billing system or sends notes to auditors for further review. Studies have documented the issues with E&M coding. Over-coding can lead to increased institutional risk. The result is frequent under-coding and lost revenue.

Automated systems replace manual coding processes that are tedious and time consuming. After a patient is discharged, a clerk would physically retrieve the medical documents and pass it to a health records analyst who would extract the appropriate information for the billing system. Then the medical record would be passed onto a coder who would write the codes onto a paper face sheet. Next the face sheet would get passed to a data entry operator who would again access the billing system and enter the coding information into the account for final billing.

Worldwide, the computer assisted coding markets are anticipated to grow from \$50.9 million in 2007 to \$2.7 billion in 2014. The markets are primarily U.S. markets because of the primary role that insurance plays in the health care delivery system. Worldwide markets start to grow as more hospitals and physician offices seek to get control of systems costs and introduce automated process systems. The study cost is \$3,300 for a single copy, \$4,300 for a web site posting.

WinterGreen Research is an independent research organization funded by the sale of market research studies all over the world and by the implementation of ROI models that are used to calculate the total cost of ownership of equipment, services, and software. The company has 35 distributors worldwide, including Thompson Financial.

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