



AUDIT ANALYTICS IN HEALTHCARE

Harnessing the power of analytics to drive better results from analytics is an on-going challenge for audit, compliance and fraud investigation groups. Since 2003 Arbutus continues to serve and listen to our users in the healthcare community. Arbutus is known for its simplicity and power in providing the best interface between your data and the answers you're looking for. Here are some examples of how analytics are being used in healthcare.

COMPLIANCE

- + Identify single day stays and subsequent readmissions
- + Identify inappropriate unbundling of lab tests
- + Identify frequent use of high risk organizations
- + Match OIG-excluded providers list with vendor, employee master files
- + Identify upcoding
- + Analyze patient data access logs to identify possible HIPAA risks/violations

PURCHASE ORDER MANAGEMENT

- + Eliminate stale purchase orders by analyzing and reporting on partial receipts
- + Identify duplicate purchase orders or receipts without purchase orders
- + Isolate purchase order types (blanket, release, dropship) for audit tracking
- + Reconcile receipts by comparing accrued payables to received items
- + Report on best purchasing performance by various locations

VENDOR MANAGEMENT

- + Identify duplicate vendors on vendor master file
- + Compare speed and accuracy of delivery by product and vendor
- + Match stock receipts with vendor ledger and report variances
- + Audit receipt and ordering by selective reports by vendor, date, etc.
- + Compare vendor performance by summarizing item delivery and quality
- + Extract pricing and receipt quantity variations by vendor and purchase order
- + Identify unused vendors
- + Fuzzy Match vendor names/addresses to payroll records for employees
- + Summarize large invoices without purchase orders, by amount, vendor, etc.

CHARGES

- + Identify charges posted outside of proper GL period
- + Identify duplicate charges on patient bills
- + Identify invalid or high-dollar charges
- + Identify late charges by department, by month, etc.
- + Identify lost charges; match supplies used to **supplies** billed
- + Match procedure codes to appropriate billed charges

MATERIALS MANAGEMENT/INVENTORY

- + Divide inventory into classes and compare percent investment
- + Identify duplicate supply items on inventory master
- + Identify items with yearly volume under on-hand quantity
- + Identify obsolete inventory by sorted turnover analysis
- + Identify starting and ending period balances by class or group
- + Isolate and analyze high value transactions by value, group, etc.
- + Physical inventory variance analysis
- + Profile supply usage by month, by department, etc.
- + Report on stock and high value balances using any selection criteria
- + Statistically analyze usage and ordering to improve turnover
- + Summarize and stratify turnover by stock item in any order
- + Identify inventory quantity errors

CLINICAL SUBSYSTEMS

- + Compare patient visit data on lab/radiology systems to patient master
- + Identify pricing discrepancies between master and subsystems
- + Compare list of valid signed-up employees to list of people actually receiving health benefits from insurance company
- + Match service dates to member eligibility dates
- + Stratify unused treatment codes by physician, department, location, etc.

PATIENT BILLING, ACCOUNTS RECEIVABLE, AND MANAGED CARE

- + Recalculate bad debt and contractor allowance reserves
- + Age receivables on date-of-service vs. invoice date to recalculate cash flow
- + Age service billing dates to assess timely collections and write-offs
- + Analyze rejected payments by financial class, procedure code, cost center
- + Calculate average days from discharge to bill, bill to payment, by payor or department
- + Calculate days in accounts receivable
- + Calculate reimbursement percentages by payer
- + Compare date-of-service to invoice date to identify opportunities to re-engineer charge processing
- + Compare detailed aging of receivables to timing cycle required by Medicare to identify opportunities for improvements in charge processing
- + Determine appropriate level of doubtful accounts reserves
- + Determine average billing amount by financial class or cost center
- + Determine average number of days from invoice to payment by financial class
- + Determine profit margin by DRG, physician, financial class, etc.
- + Determine typical billing amount range (stratification) by financial class or cost center
- + Evaluate managed care payer performance
- + Identify high-dollar accounts
- + Identify missed stop-loss payments on managed care accounts
- + Identify unbilled accounts
- + Identify underpaid managed care accounts
- + Report on payer cash payment lag by region
- + Report on prompt billing trends/ internal performance
- + Summarize and age receivables by financial class, cost center, procedure code
- + Support managed care contract negotiations with payment history
- + Identify invalid billing codes

PHARMACY

- + Analysis of payroll records for higher risk employees (nurses, pharmacists, etc.).
- + Identify employees who have not taken a vacation for an extended period of time. Risk: Don't want to be away from work because of need for drugs or "making sure to cover their tracks".
- + Identify employees with high amounts of overtime or always volunteer to cover a shift.
- + Conversely, identify employees who have a spike in number of sick days taken.
- + Trend analysis of higher risk employees and higher risk drugs/controlled substances.
- + Analysis over time of higher risk employees and use/administering of controlled substances.
- + Calculation of standard deviation of use of controlled substances compared to other employees for the same time frame.
- + Test for unusually high amounts of drug wasting (standard deviation analysis).
- + Identify orders of unusually high amounts of opioids/controlled substances compared to usage.
- + Compare use of controlled substances/narcotics compared to job description of the hospital employee.
- + Test to see if the use of the controlled substances prescribed fits with the diagnosis of the patient or for higher doses than normal of controlled substances for certain patients and/or certain diagnosis.
- + Reconciliation of drug usage/ with Automated Dispensing Cabinets (ADC)'s and wasting reports.
- + Test for unusual patterns on wasting reports (same employees always use the same witness, may be sign of collusion).
- + Compare access to ADC/controlled substances based on job description and duties performed.
- + Test if access to ADCs and controlled substances removed in a timely manner after hospital employee changes positions or moves to another department.
- + Identify employees with access to multiple ADCs. Employees may attempt to obtain drugs/opioids from more than one ADC to avoid detection or triggering a spike in the SD.

- + Identify employees accessing the ADC after shift ends, before shifts start or who are not scheduled to work.
- + Test for hospital/pharmacy employees listed on OIG List of Excluded Individuals and Entities (LEIE).

INFORMATION SYSTEMS/SECURITY

- + Compare authentication/authorization files to employee files to identify terminated employees
- + Identify corrupt data fields
- + Identify duplicate records
- + Sort current system lists by system privilege to identify people who have more access than required for job duties (including I.S. employees)
- + Compare system access to physical security logs

MEDICAL CLAIMS

- + Analyze timeliness of claims payments by comparing claim date, date claim received, and date claim paid
- + Highlight indicators of fraudulent claims practices

SALARIES & PAYROLL

- + Analyze productivity – hours of patient care, etc.
- + Compare and summarize costs for special pay, overtime, premium, etc.
- + Compare wage and salary rates to approved ranges
- + Extract all payroll checks where the gross dollar amount exceeds set amount
- + Identify changes in exemptions, gross pay, hourly rates, salary amounts, etc.
- + Identify false/invalid/duplicate Social Security numbers
- + Identify overtime abuses
- + Report entries against authorization records for new or terminated employees
- + Review highly paid employees
- + Summarize payroll distributions for reconciliation to general ledger
- + Identify multiple payroll deposits to the same bank account

PHYSICIANS

- + Determine physician contract compliance
- + Evaluate physician practice history by patient type, payer, etc.
- + Report on incomplete physician profiling information
- + Test physicians for current accreditation
- + Selectively audit new physicians for reporting compliance

ACCOUNTS PAYABLE

- + Calculate average days to pay invoices
- + Calculate days in accounts payable
- + Create activity summary for suppliers with duplicate products
- + Determine frequency of non-purchase order check requests
- + Evaluate purchasing contract compliance
- + Extract invoices posted with duplicate purchase order numbers
- + Find duplicate invoice payments
- + Find freight and tax overcharges
- + Identify cash discounts not taken
- + Isolate vendor unit price variances by product, over time
- + List missing accounts payable check numbers
- + Match patient refund payments to accounts receivable records
- + Review 1099 compliance
- + Review recurring monthly expenses and compare to posted/ paid invoices

MARKETING

- + Compare patient ordering histories to patient demographic information for accuracy
- + Develop patient statistics by zip codes or other demographic data
- + Identify profitable segments of patient population for advertising focus
- + Report on incomplete or miscoded patient demographic information

Contact us to learn why Arbutus has become the technology partner of choice for many organizations, helping them realize their vision for audit analytics and controls monitoring.



Based on 25 years of innovation excellence, Arbutus delivers the very best in purpose-built audit analytics technology to meet the exacting demands of today's business environment. Auditors, business analysts, and fraud investigators rely on Arbutus to enhance their testing, analysis and compliance capabilities.

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