LEVERAGING DATA AND ANALYTICS TO DETECT FRAUD & ABUSE IN HEALTHCARE

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According to the Institute of Medicine (IOM), fraud and abuse in healthcare contribute to as much as $75 billion each year. Fraud can be broadly defined as intentionally making false claims or representations to receive unauthorized benefits or reimbursement, such as billing for services that were not provided. Abuse describes inappropriate actions that are not consistent with sound medical, fiscal, or business practices, such as obtaining multiple prescriptions for the same medication from different providers. Fraud and abuse not only lead to higher costs of care for consumers, taxpayers, and employers, but also adversely impact the quality and safety of care provided. Due to the complexity and prevalence of fraud and abuse, it is critical that healthcare payers, providers and other organizations detect criminal practices with advanced techniques.

Data and analytics can be leveraged to detect and prevent fraud and abuse across the healthcare industry, including employers, health plans, hospitals, government, pharmacies, and research. Traditional methods include healthcare data management, clinical analytics, data mining, and predictive modeling. Effectively managing healthcare data and understanding the format and organization of data is critical to identifying fraud and abuse. For example, effective clinical analytics can show if healthcare services billed for by a healthcare provider were appropriate for the patient, or whether it could be a case of fraud. The use of analytics can help to eliminate false positives, or the inaccurate indication of fraud or abuse, to ensure that only truly fraudulent or abusive cases are flagged. First-generation predictive models, which use demographic data and historical financial data to predict risk, use traditional parametric statistics to identify atypical behaviors or billing patterns by the provider.

Innovative statistic and analytic methods can also be used to detect fraud and abuse, including the linking of non-traditional data, second-generation predictive models, and real-time transactional surveillance. Although fraud, waste and abuse can be identified by examining administrative claims data of specialties, procedures, treatments and diagnoses, or performing cross-claims analysis, linking non-claims data to claims data can be extremely valuable for fraud detection. Joining data sets across multiple states or databases can strengthen the evidence against possible fraud and abuse cases. Second-generation predictive models are usually comprised of multi-dimensional models and probabilistic models with thresholds that utilize refined parametric statistics. Lastly, real-time transactional surveillance can provide relevant and timely insight into potential risk for fraud and abuse than traditional historical data analysis.

While healthcare providers and private payers are using some of these methods to prevent fraud and abuse, the Centers for Medicare & Medicaid Services (CMS) also engages in national initiatives of its own that use data and analytics. For example, program integrity rules issued by CMS under the Affordable Care Act (ACA) are aimed at prioritizing Medicare, Medicaid and the Children's Health Insurance Program (CHIP) program integrity, or preventing fraud and abuse. By leveraging data and analytics, CMS can analyze public records, mine and harmonize data, and score and stratify provider risk of fraud and abuse. Public records can also be used to assign unique identifiers and risk scores for individual patients and entities. These identity analytics can reduce fraud by authenticating identities and mitigating risks.

Fraud and abuse represent a great source of waste in the healthcare system that has a significant impact on providers, payers, patients and communities. However, data and analytics can be utilized to predict risk of occurrence, identify criminal activities, and prevent fraud and abuse across the healthcare system.