ABBYY

Adverse Drug Reactions

Utilize patient and process data to improve diagnosis and reporting of ADRs

Key challenge

Adverse drug reactions (ADRs)—negative effects of a medication that occur during normal clinical use—are more than just unfortunate mishaps. They drive up hospital costs, complicate and extend patient treatment plans, impact the trust patients place in their medical providers, and can even prove fatal. In England, for example, ADRs account for up to 6 percent of hospital admissions, carrying a 2 percent mortality rate and a cost of £466 million (US$ 602 million) per year.

Preventing ADRs—on both local and global levels—requires vigilance, coordination, and prompt reporting to the proper oversight organizations. Unfortunately, the clinical diagnosis of an ADR is not always obvious, and uncovering the root cause of a reaction is often a complicated process, particularly in patients who are taking more than one drug.

Accurately diagnosing an ADR requires analyzing input and analysis from a diverse array of sources, which can include patient charts (paper and/or electronic), records of pharmacist consultations and patient interviews, lab results, pharmacy records, physician notes, and historical data from internal and external databases.

Compiling and reviewing all this data manually is a huge undertaking requiring specialized knowledge of what to look for. Documenting known cases in a way that contributes to internal and external knowledge bases is often a matter of hit-or-miss.

Adverse drug events are responsible for

1 in 9

emergency department visits in Canada.

↳ Source

Up to 20%

of inpatients will experience at least one ADR during their hospital stay.

↳ Source

Solution

ABBYY intelligent automation technologies offer pharmaceutical companies and governing bodies the artificial intelligence (AI)–driven solutions they need to process large amounts of data from dozens of sources in tracking ADRs. At the same time, these organizations can gain data-driven insights into their ADR tracking processes, identify and address bottlenecks and inefficiencies, and monitor continuously for aberrations that could delay life-saving decisions.

Take control of ADR diagnosis and reporting

The key to prompt, accurate diagnosis and reporting of ADRs is data. ABBYY puts your data to work to help you streamline ADR handling with intelligent document processing (IDP) and advanced process mining, resulting in smarter processes that make the best use of the content inside.

ABBYY intelligent automation solutions provide the tools for...

- **Automatic extraction of possible ADR-related information** from a broad range of physical and digital document sources, including unstructured content such as paper charts and handwritten notes.
- **AI-based analysis of all relevant information** to assist pharmaceutical companies and governing bodies in accurately diagnosing ADRs.
- **Continuous monitoring of systems** to alert users to combinations of factors that have been connected with ADRs (for example, patient age and gender plus a pre-existing condition plus a certain dosage of a certain drug), enabling them to identify high-risk cases and possibly prevent future reactions.
- **Process discovery and analysis** using advanced algorithms to timestamp data from a variety of systems and deliver insights needed to understand, improve, and monitor ADR-related processes, enabling pharmaceutical companies to take measures to eliminate inefficiencies.

Discover the ABBYY difference for ADR identification and reporting

Improve patient safety

- Make data from all sources—including unstructured data such as physical files—available digitally for use by AI-powered applications
- Automatically identify “red flags” that could indicate a possible ADR
- Leverage AI to perform some of the “detective work” in diagnosing ADRs and identifying root causes, enabling faster diagnoses

Streamline diagnosis and reporting processes

- Create “digital twins” of ADR diagnosis and reporting processes to present a clear picture of how they execute
- Easily identify and address disruptions that cause process delays and waste resources
- Monitor processes continuously to flag anomalies that could lead to delays or errors

Prevent future ADRs from occurring

- Continuously monitor incoming data for combinations of factors that could indicate an ADR risk
- Alert users to potential high-risk cases as soon as they are identified

ABBYY helps healthcare organizations optimize use of their resources while maintaining high standards for patient care. Our solutions ensure that technology accelerates your organization toward the achievement of its goals, now and in the future.

Learn more at **ABBYY.com/healthcare.**

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