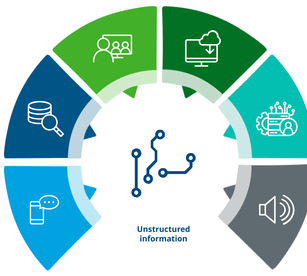
Multichannel Pharmacovigilance: How AI and NLP Support Drug Safety Monitoring

Three ways pharma companies are using tech to detect adverse events

Regulators such as the EMA and FDA require drug manufacturers to screen for and report potential adverse events — but with the high volume of company-owned data these days, how?

Between social media chatter, call centers, CRMs, and other channels, the ecosystem of unstructured data is complex and broad. Fortunately, automation can help through artificial intelligence (AI) and natural language processing (NLP).



Social media
CRMs
Online
Third-party vendor systems
Internal data systems
Call center audio files

The potential of AI and NLP

AI and NLP tools work symbiotically — AI as the automation engine and NLP as the recognition apparatus for adverse events.

AI

Establishes rules for what an adverse event looks like

NLP

Identifies text and spoken words suggestive of adverse events or potential safety risks

IQVIA Vigilance Detect

Manufacturers use Vigilance Detect to identify robust safety patterns across social media, human-bot or human-human calls, patient support programs, and much more.

Social media

- Detect **slang and emojis** (ouch and groan)
- Interpret multiple **languages e.g.,** English, Spanish, and Japanese
- Account for **country-specific** regulations (FDA, EMA)

Of **8.1M** social/digital records, Vigilance Detect moved **66% of redundant data out of human workflows.**

Voice calls

- Identify instances of adverse events, product complaints and **off-label use**
- Automate **voice-to-text transcription**
- **Pinpoint safety events** in unstructured audio files

Across more than **60,000 calls**, Vigilance Detect achieved **94% efficiency** over manual methods.

Remediation activity

- Search safety databases, vendor **documents, call center files, PDFs and more** for unreported adverse events
- Respond to **concerns identified during regulator audits**
- Quickly meet **regulator deadlines**

Vigilance Detect found **100% of undetected adverse events** for one large pharma company, according to manual audits by a third party.

Drug safety surveillance, by the numbers

In 2022 alone, Vigilance Detect processed millions of pieces of unstructured data for leading manufacturers. With Vigilance Detect, you receive a fully CRF Part 11 compliant process and outputs that flow seamlessly into any downstream case processing workflow.

4M+
digital records processed

180,000+
virtual assistant/ chatbot interactions

3M+
social media posts

100,000+
emails and PDFs

1M+
CRM records

60,000
audio files

Be more vigilant

Navigate a rapidly expanding landscape of pharmacovigilance challenges with automated detection of adverse events. Learn how to get started with Vigilance Detect at iqvia.com/vigilanceplatform.

1. IQVIA Vigilance Detect Sources