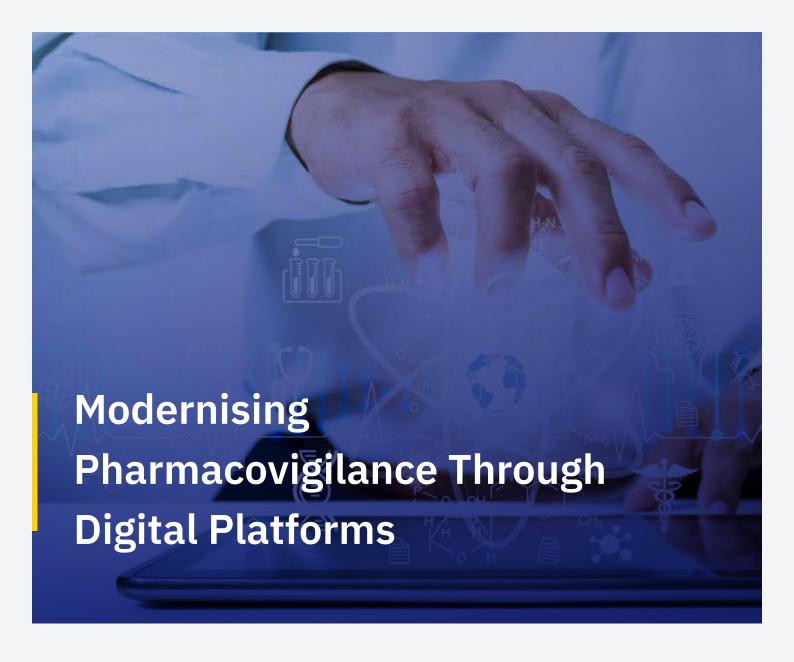




Saudi Arabia is establishing itself as a regional leader in digital health regulation through the Saudi Food and Drug Authority's (SFDA) groundbreaking integration of advanced technologies into pharmacovigilance and cosmetic safety oversight.

Aligned with Vision 2030's digital transformation goals, these initiatives are setting new benchmarks for proactive, data-driven regulatory systems that enhance public health protection.



The transformation began with modernising the National Pharmacovigilance Centre's adverse reaction reporting system. Moving from paper-based submissions to the fully digital "Saudi Vigilance" platform marked a significant step forward. The introduction of smart reporting forms featuring structured data

fields and behavioural nudges
based on psychological principles
significantly improved reporting
quality and completion rates. This
digital foundation enabled the
development of centralised
dashboards that provide real-time
adverse event analysis, allowing
early identification of safety signals
and under-reporting trends.

Harnessing Automation for Efficiency and Accuracy

A key innovation has been the strategic implementation of Robotic Process Automation (RPA) to streamline pharmacovigilance operations. By automating repetitive tasks such as report triage and initial data verification, the SFDA has achieved remarkable efficiency gains. The recently launched RPA signal detection

service exemplifies this
progress, reducing processing
times while enhancing the
accuracy of safety signal
identification. These
technological solutions have
optimised workflows and
improved employee satisfaction
by removing monotonous
manual tasks.





The SFDA's digital transformation extends to proactive risk minimisation through innovative educational platforms. The aRMMs e-learning system, featuring 112 instructional videos covering high-risk medications, has revolutionised health care professional training. Perhaps more impactful has been the

integration of digital risk
minimisation measures directly
into hospital information systems
across 12 facilities. This
pioneering approach embeds
safety alerts and educational
content into clinical workflows,
ensuring critical information
reaches prescribers at the point
of care.

Medication error prevention has similarly benefited from digital innovation. The transition from the Phonetic and Orthographic Computer Analysis system to the advanced Saudi Name Registration (SNR) platform has enhanced the detection of potentially confusing drug names. With improved algorithms covering both Arabic and English nomenclature, along with real-time alerts and automatic updates, the SNR system represents a significant upgrade in pre-market safety screening.

Looking ahead, the SFDA is preparing to extend this digital transformation to cosmetic product safety. Proposed artificial intelligence (AI)-driven initiatives include computer vision systems for regulatory violation detection, automated ingredient compliance checking and natural language

processing tools to analyse consumer feedback for early warning signals. While these projects remain under development, they demonstrate the SFDA's commitment to applying cutting-edge technology across all regulatory domains.

This comprehensive digital transformation strategy positions Saudi Arabia at the forefront of regulatory innovation. By successfully integrating AI, automation and data analytics into its operations, the SFDA is enhancing current pharmacovigilance capabilities and building the foundation for future advancements in consumer product safety. These efforts collectively support Vision 2030's ambition to create a knowledge-based economy while ensuring the highest standards of public health protection for Saudi citizens.