



FACT SHEET

APEXON HEALTHCARE DATA ANALYTICS PLATFORM (HDAP)

Harness Healthcare Data for Competitive Advantage with Apexon and AWS



DISPARATE, SILOED DATA SOURCES CREATE WIDESPREAD HEALTHCARE CHALLENGES

Healthcare organizations are under increasing pressure to reduce costs while improving patient care and outcomes.

Many are pursuing this through increased digitization and better utilization of data to enable more remote care, inform care decisions, and streamline operations. However, complex, siloed systems and a lack of data standardization are seriously hindering these efforts.

APEXON HEALTHCARE DATA ANALYTICS PLATFORM (HDAP) ON AWS

The Apexon Healthcare Data Analytics Platform (HDAP), built on AWS managed components, enables healthcare companies to move quickly to centralize, utilize and monetize their data. HDAP on AWS acts as a data accelerator — enabling users to harness healthcare data assets more effectively for diagnostic, exploratory, predictive and prescriptive needs.



PAYER DATA

Patient Claims, Pharmacy



PROVIDER DATA

EHR Systems (EPIC, Cerner etc.)



POPULATION DATA

Public Sources



OTHER SOURCES

Situation-Specific

WITH HDAP RUNNING ON AWS, HEALTHCARE ORGANIZATIONS GET:



Ready access to raw data and the ability to process all standard healthcare data types (HL7, CCDA, DICOM, FHIR, labs, known EMRs)



Support for standard models such as OMOP for persistent healthcare data, enabling normalization and longitudinal data representation



Data management practices that ensure security, reliability and data quality



Streamlined regulatory healthcare reporting, KPI calculations and the ability to leverage data for research



A reference implementation built on AWS using platform components enabling Pay-As-You-Go services



Analysis to prevent revenue loss due to inaccurate data and to identify opportunities for new patient services



Real-time processing and complex event handling to provide decision support for care givers



Exploratory analytics and data science



Support for highly automated operations with DevOps and SRE

**APEXON HDAP AND AWS ENABLE ENTITIES ACROSS THE
HEALTHCARE ECOSYSTEM TO LEVERAGE ALL THEIR DATA ASSETS
TO DELIVER HIGHER SERVICE LEVELS, INCREASE OPERATIONAL
EFFICIENCY AND ACHIEVE FINANCIAL PERFORMANCE.**

POWERED BY APEXON HDAP

HEALTHCARE DATA ANALYTICS USES CASES

Apexon HDAP on AWS can be used by different players in the healthcare ecosystem to address multiple data use cases to improve research, patient care and operational processes. Below are some of the many examples:



RESEARCH OPERATIONALIZATION

HDAP can ingest data—both structured and unstructured—from multiple sources to crystallize, categorize and classify it for practical clinical use.



CLINICAL DATA MINING

HDAP can mine clinical notes in unstructured formats like free text and presents it in a consumable format for easy analysis and insights.



EVIDENCE-BASED DECISION SUPPORT

HDAP can pull and categorize data such as patient diagnosis and treatment data from EHR systems to help identify patterns and assist in care decision support.



PUBLIC HEALTH PATTERN IDENTIFICATION

HDAP's comprehensive coding structure provides unified data which is accurate, tagged and quality controlled to facilitate improved public health reporting and tracking.



PATIENT DATA AGGREGATION

HDAP can use a master patient index (MPI) to aggregate an individual's health information for clinical analysis, research, care coordination, and improved patient outcomes.



HEALTHCARE DATA MAPPING

HDAP can map and optimize core data that might use different labels in different environments to make it more consumable, searchable and actionable.



HEALTHCARE DATA STANDARDIZATION

HDAP can map and validate critical patient care codes to ensure accurate and complete information is available for accurate patient care, tracking and billing.



PRESCRIPTION MANAGEMENT

HDAP helps providers optimize patient care as well as care costs and reimbursements by enabling the benchmarking of effective patient prescriptions and dosages.



DATA INTEGRATION / COLLECTIVE INTELLIGENCE

HDAP can integrate different types of data for multiple uses and users; e.g., billing data for administrators; patient diagnostics and treatments for physicians; adverse conditions/reactions for nurses; data analysis for researchers.



PATIENT DATA CONTROL

HDAP can capture complete patient medication histories and make it easy to share with other providers and public health organizations to ensure safer and more effective care. This data can also be used for administering immunizations.



HOSPITAL OPERATIONS

HDAP can monitor patient flow, bed occupancy, lengths of stay, readmissions, cost analysis vs. industry benchmarks, supply chain, and inventory for more informed decisions about population health, staffing and care.



PROCESS IMPROVEMENT

HDAP can accommodate new procedures and techniques such as the expanded coding and granularity introduced by systems like ICD-10. It also helps reduce the hassle of audits and detects and prevents healthcare fraud and abuse.



RESEARCH DATA CLASSIFICATION

HDAP can be used to standardize healthcare classification codes, procedure codes, labs results code, medication and drug codes, image-related codes and more to enable more intuitive care analysis and correlation. It also allows for comparative research with other countries.



DATA QUALITY MANAGEMENT

HDAP can provide a data tagging engine which can provide added context and checkpoints to existing data. This enables better data visibility, verification and application; e.g. prescription safety, clinical decisions, operational planning.



QUANTITATIVE DATA ANALYSIS / PREDICTIONS

HDAP can use quantitative analysis of functional values to help clinicians identify patient abnormalities and predict phenotypes. Data from different EHRs can be integrated into a larger database and geo-location specific tracking is also possible.



CLINICAL DECISION SUPPORT

HDAP can help identify patients at risk of complications, recommend medications and dosage, and alert to early signs of infection, etc. based on patient data analysis.



PERFORMANCE MANAGEMENT

HDAP can act as a complete healthcare data ecosystem to improve clinical, financial, and administrative performance. Administrators can track time and resources spent on procedures, allocate resources, increase billing and payment accuracy and reduce the risk of rejected claims for incorrect coding.



REVENUE MANAGEMENT

HDAP can capture, unify and ratify data such as codes, charges and invoices for clinical services, lab tests, and medications. This digitization increases reimbursements, decreases billing errors, optimizes patient care timing, and provides better documentation to resolve any potential financial disputes.



CARE COMMUNICATION & COORDINATION

HDAP enables clinicians to document services provided and access up-to-date information about their patient. It also streamlines the transition process and knowledge sharing between different care settings for improved communication and coordination.

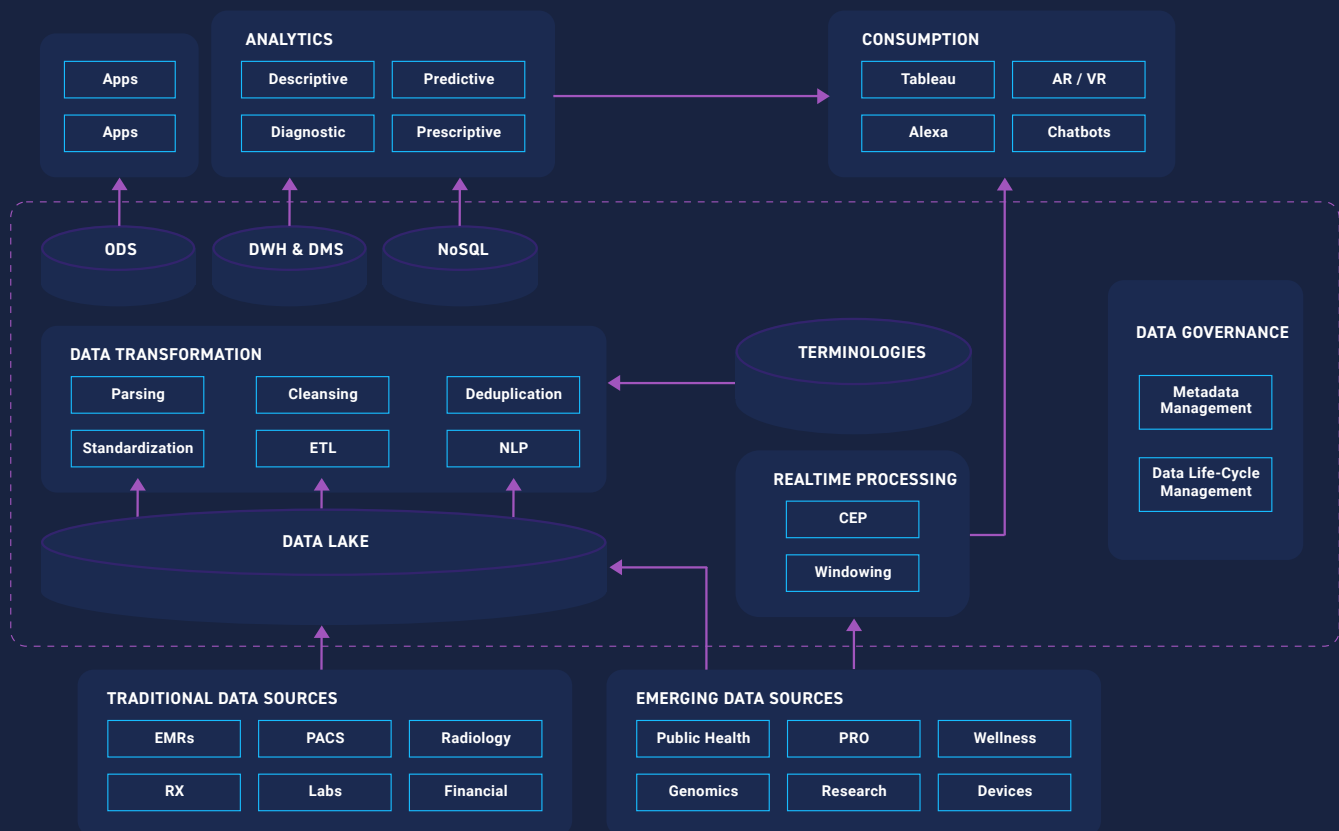


PATIENT SELF-CARE ENGAGEMENT

HDAP can enhance patient self-care by offering important follow-up information, instructions, reminders and links to necessary resources. Information technology affects more and more of patients' lifestyle today and many feel more comfortable accessing services digitally.

APEXON HDAP ON AWS

A CLOSER LOOK





DATA ANALYTICS & INGESTION

- Operational, financial and clinical analytics
- Research support
- Improved user experience with newer tools



DATA TRANSFORMATION

- Parsing structured and unstructured healthcare data to extract relevant clinical content
- Data de-duplication, cleansing, standardization and enrichment using existing terminology and data practices



STRUCTURED DATA

- Data warehouses and domain-specific data marts for clinical, operational, and financial KPIs
- ODS used to power enterprise applications
- NoSQL used the share non-relational data



DATA GOVERNANCE

- Processes and tools to ensure data quality



DATA LAKE

- Raw data stored as is with simple indexes
- Always available



DATA SOURCES

- Traditional clinical and operational data
- New, typically high volume

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Apexon is a pure-play digital engineering services firm focused on helping companies accelerate their digital initiatives from strategy and planning through execution. We leverage deep technical expertise, Agile methodologies and data-driven intelligence to modernize systems of engagement and simplify human/tech interaction.

We deliver custom solutions that meet customers' technology needs wherever they are in their digital lifecycle. Backed by Goldman Sachs and Everstone Capital, Apexon works with both large enterprises and emerging innovators — putting digital to work to enable new products and business models, engage with customers in new ways, and create sustainable competitive differentiation.

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