SA Health
(Department for Health and Wellbeing)

Envision and deliver the Central Data Analytics Platform for the Office of the Chief Medical Information Officer – for *better patient outcomes and care.*

exposé
Data Exposed

Central Data Analytics Platform for the Office of the Chief Medical Information Officer

Envision and deliver a realtime Central Data Analytics Platform using modern best practice to support growing and varied business outcomes from a wide range of users, for *better patient outcomes and care*.

PROBLEM

SA Health understood that the data assets they owned were not optimised to support scalable operational analytics and insights to support better patient clinical care and various research activities, as the data and systems had too much fragmentation. *Required was a solution to overcome fragmentation of data and systems, ultimately to provide a 360 degree view of a patient.*

The data solutions themselves could not be extended as they were purpose built around requirements such as management reporting level data warehouses and data repositories to support apps. *Required was a design that could easily scale with new data and to support new outcomes without costly redesign.*

Incumbent analytical methodologies and solutions across SAH had been aligned to the requirements for performance reporting, outcome monitoring and regulatory compliance. However, methodologies and solutions did not meet the increasing demands from management, clinicians and other stakeholders who understood the value of easy to understand, trusted, up-to-date and accessible data. *Required was a modern and comprehensive data analytic solution, using modern practices and methodologies.*

The data (including the important metrics and attributes) was not available in realtime and gaining quick and relevant insights from it was hard due to the fragmentation, inflexibility and incumbent analytical solutions. *Required was realtime data transformed so that it could be understood by many, for quick insights and decisions.*

SOLUTION

Exposé envisioned and delivered an overarching data analytics platform that will serve broad and varied analytical requirements across SA Health.

The initial focus was **realtime clinical data**:

250,000+ daily **realtime records** are ingested into the solution from emergency departments, surgeries, pathology, radiology, admissions, transfers, and discharges of South Australia's government hospitals.

The data is then **contextualised** with other datasets from hospital systems and wrapped into easy-to-understand data models linking all the data together.

These **realtime models** are now accessible and can be leveraged by both non-technical users via interactive reporting, as well as by technically minded clinicians for their own analysis and querying.

This Central Data Analytics Platform now provides the foundation and patterns for many other use cases beyond clinical by being fully scalable and extendable to accommodate many more datasets and easily linkable to the realtime view of the subject mater central to SA Health, i.e., **the patient**.

BUSINESS BENEFITS

The biggest and most immediate benefit is the ability to understand a **360-degree clinical view** of a patient in realtime, across previously fragmented data from unrelated systems across the health network.

The Office for the Chief Medical Information Officer has already seen this **in action through interactive visuals** provided from the solution by Exposé including a realtime understanding outliers in haemoglobin levels for patients when compared to mean corpuscular volume counts, and trends over time. A second example is realtime view of patient arrivals in, and discharges from ED's, and a deep analysis of these metrics and trends.

Analysis can easily be **extended with over 1,000 attributes and measures** as diverse as practitioner information, locations, diagnosis, observations, and many more.

The easy-to-understand model means that insights will no longer limited to the technically savvy, but securely to a **much wider user base**.

Ultimately the biggest benefit is potentially deeper and more immediate insights to **improve patient care**.