



Public Health

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Australian state and federal Health Departments want to improve and optimise length of stay, mortality rate and procedure rate as well as readmission rates and bed availability. For example, the Clinical Advisory Committee of the SA Department for Health and Ageing highlighted the need for improved consistency of:

- hospital length of stay
- mortality rates
- procedure rates

Their stated goal is “To transform our healthcare system to provide the quality care, effectiveness and adaptability that all citizens expect and deserve.”

Hospital length of stay

Why do patients with similar conditions have widely varying hospital stays? Is it the patient, their treatment, the hospital? All three? Or something else?

Mortality rate

If Health Departments are to improve consistency of mortality rate across hospitals, we need to understand what is driving the variation in observed rates. Where do we start?

Procedure rate

When hospitals show a disproportionately high incidence of certain procedures. What is the cause of this and what can Health departments do about it?

All the above outcomes are affected by complex multi-factor interactions and vary through time. Expert hunches cannot fully capture these complex combinations and business reporting is inadequate for delivering the required understanding from huge volumes of complex, noisy data. In situations like this, organisations worldwide have been successfully using modern data science and advanced analytics methods that gain clear insight into their business issues.

Data science can deliver clear insight on what levers Health Departments can use and how to improve both business and public health outcomes.