



SPATIAL INFORMATION DAY 2010

Adelaide Convention Centre | FRIDAY 13 AUGUST 2010

Spatial Information Day 2010 Abstract

Title: Mapping Population Health Needs for Service Planning

Session: 5 – Community and Planning

Presenter: Dr John Biggins – SA Health

Abstract:

Introduction

SA Health Strategic Plan identified key strategic objectives for reform of the health system, which included “implementing a population health approach to health service planning, funding and delivery ... that takes into account the broader determinants of health and well-being”. In order to achieve these objectives, service planners require ready access to data that is relevant, of known quality and in a format that is fit-for-purpose.

Objectives

Spatial Information Portal (SIP) was developed as a single entry point for providing enterprise-wide access to data to support the development of service plans designed to address priority health needs within their local communities. This involves being able to assess population health status since it is one of the key drivers of service demand, as well as describing the current provision of services and evaluating the extent to which it meets current levels of demand.

Service planners also need information regarding patterns of service utilisation, such as the nature and extent to which residents within a region are utilising health care services available from local providers as opposed to accessing these same services from providers outside of the local area.

The key objectives for SIP were to provide users across the enterprise with access to:

- Consistent data as a common evidence based for service planning decisions.
- Common models and business rules for analysing data.
- Range of user interfaces customised to meet the specific data requirements and levels of technical expertise of different types of users.

Methodology

Measures for assessing population health status included estimated prevalence rates for risk factors, diagnosed and undiagnosed conditions for a range of chronic diseases based upon data from population survey and hospital service activity. Prevalence rates were calculated for different population types to identify those at most risk (based upon high prevalence rates) as well as map their distribution.

Analysis of the patterns of service utilisation involved:

- Determining the *origins* (SLA) of patients accessing inpatient services from hospitals; and/or

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- Determining the *destinations* (hospitals) where patients go to access services.

Users are able to apply “filters” to create different views of the data by selecting different hospitals, SLAs, services, age, gender and time periods.

Results

SIP provides access to key corporate data to assist service planning. Different interfaces are available that meet the needs of different types of users and their preferences for how to analyse and display data. This is achieved through the integration of different technologies including GIS (provided by ArcGIS Server from ESRI) and business intelligence (provided by Business Objects from SAP Australia). This provides SIP users with access to the powerful data query and reporting capabilities available within the BO suite of products, with the option of publishing this data using ArcGIS Server map services.

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