SPOT

Service Planning Operational Tool

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Abstract

Inequitable health outcomes for remote and rural Australians are linked to poor access and utilisation of healthcare services.

Without a comprehensive knowledge of existing service locations, relative to population, governments and non-government organisations find it difficult to allocate resources to facilitate better access to primary health care and other health services, and to determine constitutes ‘reasonable’ service access.

The RFDS has developed a Service Planning and Operational Tool (SPOT) to assist in planning where services should be located, relative to need, by mapping existing services and overlaying these with population data.
What is SPOT

To create SPOT, a 1 km² grid was applied to a map of remote and very remote regions of Australia, and the population of each grid square (‘node’) was added. This enables users to visualise geospatial health service demand.

The demographics of the populations were then added to each node, allowing users to identify population groups with high or specific needs.

A comprehensive database of health services within remote and very remote Australia was then compiled from multiple sources that include:

- ABS population data
- National Health Services Directory known health service data
- NACCHO data on community controlled health organisations
- RFDS service location and activity data
- Capacity for additional data sources relevant to local area information

Developed with support and in close partnership with the Department of Health’s Health Workforce Division
What SPOT does

• SPOT assists RFDS in identifying service options to improve access to primary (and acute health services) for communities across remote and very remote Australia

• It maps health services, population and distances of populations by road from health services by producing mapping showing facility locations (diamonds) from where health services are provided and various population distributions (circles – size reflects relative population level)

• It takes account of current known service provision in remote and very remote Australia

• It relates these to measures of demand for health care mainly using population types (and RFDS own patient data historical demand patterns)
SPOT geographical coverage

- Designed to initially cover only those parts of remote and very remote areas served by RFDS aeromedical program (blue diamond is a RFDS clinic)
- Currently covers 446,742 people in remote and very remote areas
- Does not currently cover any part of Victoria or Tasmania (but will in version two)
SPOT service coverage

- All RFDS services
- Hospital services
- Emergency medical
- General Practice/GP (doctor)
- Maternal, child and family health
- Pharmacy
- General dental
- Aboriginal health clinic
- Nurse-led clinic

- Counselling
- Drug/alcohol
- Mental health
- Audiology
- Occupational therapy
- Optometry
- Podiatry
- Physiotherapy
- Diabetes educator
- Speech pathology/therapy
- Dietetics
Illustration: 3 hr drive to primary care

Populations within (green) and outside (grey) a three hour drive time from primary health care
Illustration: a primary care service

- Glendambo
- 88.7% of a population of 5,665 people live within 2 hr drive of facility
Illustration: Indigenous GP access

- Indigenous populations within (green) or beyond (grey) 2 hour drive of GP services in Northern Australia
Illustration: Dental coverage

- Western NSW communities within (green) and beyond (grey) 2 hour drive of dental services.
- Blue diamond are RFDS dental clinics
- SPOT auto add function recommends additional dental services in areas of priority need should be validated for location at:
  - Cobar
  - Lake Cargelligo
  - Dairy Hill
  - Gwabegar
SPOT's future

- Data and useability to be validated over next twelve months
- Use for RFDS service planning from 2019
- Addition of Tasmanian and Victorian coverage
- Addition of additional allied health services as data become available
- Development of public good use and access protocol
- Future use to inform public policy priorities for placement of services in areas of most need

RFDS Data Analyst Andy Ransom manages the RFDS SPOT program.