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Visualising linked data using GIS: Western Australian Child Development Atlas

Sims, S¹

¹Telethon Kids Institute

Introduction

Where people live can strongly influence their level of exposure to health-damaging factors, their vulnerability to poor outcomes, and the consequences of experiencing those poor outcomes. Geographical mapping of child outcomes is therefore an important component of monitoring the health and wellbeing of children and young people.

Conclusion/Implications

Mapping population data on children's health and wellbeing can help identify areas of highest need and priority, and facilitate a targeted focus for service delivery within jurisdictional areas, including rural and remote regions. Outcomes can be monitored over time, enabling evaluation of the effectiveness of changes to service and policy.

Objectives and Approach

The Western Australian Child Development Atlas (CDA) maps population-level administrative, census, registry, and survey data, aggregated at various levels of geography. The project utilises geographic information system (GIS) technologies to identify and investigate spatial patterns in key health, social, learning and development indicators, overlaid by service locations.

The CDA is an online, interactive platform that provides policy developers, service providers, communities, and government with access to quality and easily comprehensible spatial data on the outcomes of children and young people. This information helps to identify geographic areas of highest need and priority, and patterns in service distribution relative to need.

Results

The CDA maps linked and non-linked de-identified aggregated data on children and young people (0-18 years) born or residing in Western Australia from 1990 until 2016. Key indicators from health, social, education, and welfare datasets are mapped at various levels of geography.

Using a case example of a WA community, we demonstrate how the CDA can enable policy-makers, service providers, and researchers to better identify priority areas for improved child health and wellbeing, and implement place-based approaches to service delivery.