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Proximity to pain management services in Australia

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Abstract

This paper aims to investigate the proximity of specialist pain management facilities to the people who receive their services.

Keywords

pain, management, proximity, australia, services

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Proximity to pain management services in Australia

EPPOC INFORMATION SERIES NO.2 2019

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Background

The electronic Persistent Pain Outcomes Collaboration (ePPOC) is an Australasian initiative which aims to improve services and outcomes for people experiencing persistent pain. It is an initiative of the Faculty of Pain Medicine and was established in 2013 with funding from the NSW Ministry of Health.

The key functions of ePPOC are to:

- facilitate the collection of standardised data from pain management services
- analyse and report these data to participating pain services, stakeholders and the broader community
- use the data for benchmarking and quality improvement
- promote research into areas of importance in pain management.

While ePPOC has been developed for adults experiencing persistent pain, PaedePPOC addresses the differing requirements of the paediatric pain management sector, supporting the collection of data items and assessment tools specific to the needs of children, adolescents and their carers.

Further details regarding the establishment of ePPOC¹ and PaedePPOC² and the assessment tools used have been published and are available on the ePPOC website at <https://ahsri.uow.edu.au/eppoc>

Aims

This paper aims to investigate the proximity of specialist pain management facilities to the people who receive their services.

Methods

The distance between each patient's home address and the pain service was estimated using the postcode of the patient's residence and the postcode of the pain service. The straight-line distance between the two was calculated using the longitude and latitude of the centre of each postcode. This was used as an *approximation* of the distance people travel to access pain management services.

The analysis included episodes of pain management between January 2014 and June 2019 where the patient attended at least one face-to-face appointment, and excluded episodes which involved telehealth service delivery only. In order to compute distance from the patient's home to the pain service, records with post office box postcodes or invalid postcodes were excluded. A number of pain services operate out of more than one location, and this is often the case in services based in New Zealand. In these instances it is not possible to know where the patient received treatment, therefore this analysis included only those services operating out of one location, and is limited to Australian services.

¹ Tardif H, Arnold C, Hayes C and Eagar K (2017). "Establishment of the Australasian Electronic Persistent Pain Outcomes Collaboration". *Pain Medicine* 18(6): 1007-1018.

² Lord S, Tardif H, Kepreotes E, Blanchard M and Eagar K (2019). "The Paediatric electronic Persistent Pain Outcomes Collaboration: establishment of a binational system for benchmarking children's persistent pain services". *Pain* 160(7): 1572-1585

Results

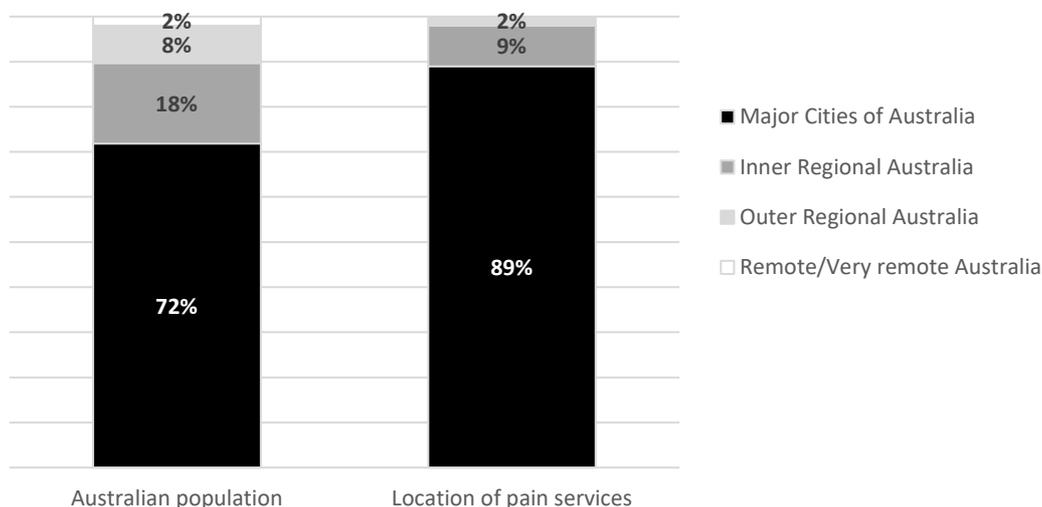
Location of pain services

In Australia, eight paediatric and 48 adult pain management services provided information to ePPOC during the years 2014 to 2019. Using the Australian Bureau of Statistics Australian Statistical Geography Standard (ASGS) – Remoteness Area (2016) classification, the pain management services were categorised as being located in:

- Major cities of Australia
- Inner regional Australia
- Outer regional Australia
- Remote Australia
- Very remote Australia

According to this classification, the majority of pain services (89%) are located in a major city. Figure 1 compares the location of pain services to the regions where Australians live.

Figure 1 - Geographical location of the Australian population³ compared to the location of specialist pain services



Distance to pain services

The distance between a patient’s home and the pain management service they attended was calculated using data for 42,591 episodes of care. The average distance was 43km (median = 14km). More than two in three patients resided less than 25km from the pain management service, while for 1 in 10, the distance was more than 100km (see Figure 2). This differed considerably by facility, as illustrated in Figure 3.

Patients travelled further to access paediatric compared to adult pain services, and to services located in inner regional areas compared to major city locations. People who live in areas of highest socioeconomic disadvantage also travelled further to receive specialist pain management (Table 1).

³ Source: Regional Population Growth, Australia, 2016-17 (ABS cat. no. 3218.0)

Figure 2 – Distance between patient residence and the pain service they attended

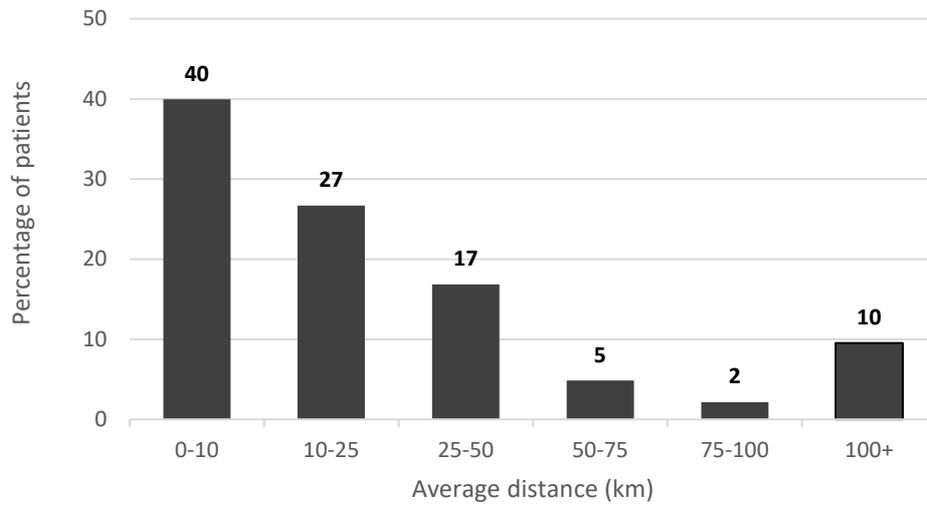


Figure 3 - Distance by pain service (paediatric services are highlighted)

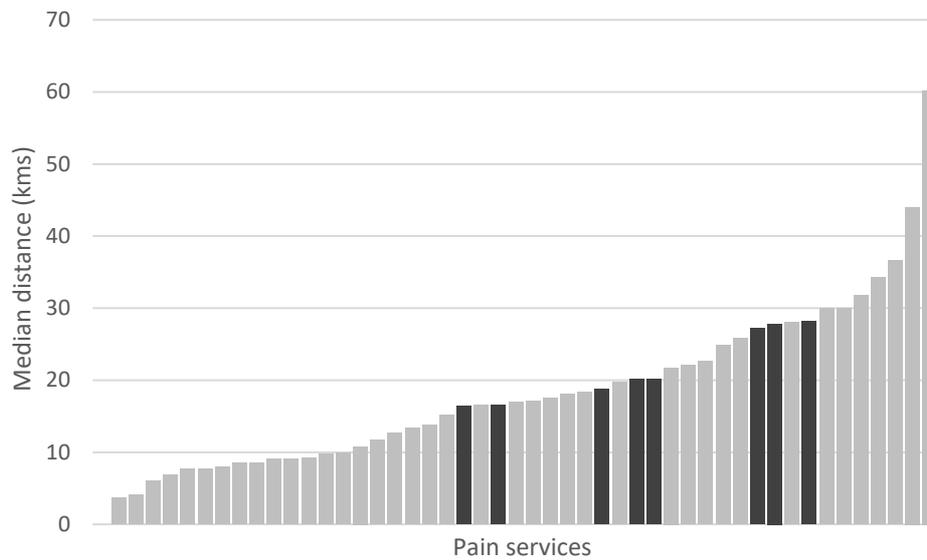


Table 1 - Distances by facility type, ASGS category and socioeconomic category

		Mean	Median	Interquartile range
All patients		43.1	14.1	26.8
Facility type	Adult	42.2	13.9	26.4
	Paediatric	67.0	22.8	48.0
Pain service location (ASGS category)	Major cities	41.7	13.5	22.1
	Inner regional	54.8	38.4	73.0
Socioeconomic disadvantage quintile	1 (least disadvantage)	16.6	8.5	12.0
	2	28.7	13.1	21.5
	3	40.7	15.1	28.1
	4	67.7	24.3	55.3
	5 (most disadvantage)	64.2	21.3	51.7

Summary

Most specialist pain management services are physically located in major cities of Australia, with one in an outer regional area and no services in remote or very remote areas.

The majority of people live less than 25 kilometres from the pain management service, while this distance is over 100 kilometres for 10% of people.

People who require paediatric services, and those who live in areas of high socioeconomic disadvantage travel further to access specialist pain management.

Series List

2018

No.1 2018: *Normative data for patients referred for specialist pain management in Australia*

No.2 2018: *Normative data for children and adolescents referred for specialist pain management in Australia*

No.3 2018: *Carer-proxy and child self-reported ratings of pain and quality of life*

2019

No. 1 2019: *Socioeconomic disadvantage and referral to pain management services in Australasia*

No. 2 2019: *Proximity to specialist pain management services in Australia*