Exploring Leave Events for Aboriginal and Torres Strait Islander People From Australian Tertiary Services: A Systematic Literature Review

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Keywords: Leave events, Aboriginal and Torres Strait Islander, health systems, Australia

Posted Date: October 12th, 2020

DOI: https://doi.org/10.21203/rs.3.rs-88538/v1

Abstract

Objective

The primary objective of this systematic review was to identify contributing causes to leave events from health services for Australian patients. The second objective was to identify evidence based preventative measures for effectively reducing leave events, which could be implemented.

Study design

Articles published in Australia were included if they reported on Aboriginal and/or Torres Strait Islander people and other Australians who leave health services prior to being seen or discharged by a medical professional. Two researchers screened each abstract and independently reviewed full text articles. Study quality was assessed, and data were extracted with standardised tools.

Data sources

MEDLINE and Google Scholar were searched for relevant publications from May 27th to June 30th, 2020. The search returned 30 relevant records. Nine additional records were identified by manual search in Google Scholar. References of included articles were searched. From these articles, 11 met the inclusion criteria. Of these 5 were from New South Wales, 2 from Western Australia, 1 each from Queensland and Northern Territory, two were conducted nationally.

Data synthesis

Four studies used a retrospective cohort method, one included patient interviews,(1) Four cohort studies and two systematic reviews were included. Two government reports and one health policy document were included in this review. All studies were from Australia using mixed methods.

Conclusions

This review identified causes for, and evidence based preventative measures that have been or could be implemented to reduce Leave Events and describes additional terms and definitions used for Leave Events.

Background

Understanding leave events from the health services for Australian patients is vital to improving health outcomes and increasing the cost effectiveness for health care systems. Australians should receive safe and quality healthcare and there is a need to understand why leave events continue to occur and how they can be reduced.(2)

In Australia, the term 'Take Own Leave' (TOL) is used broadly to indicate when a person has left the health service prior to being seeing by a health professional or has left against medical advice. This review specifically uses the term 'leave events' in order to not stigmatise a patient who may leave a health service due to factors that are currently not understood or acknowledged by the health system. This review sought to identify these factors.

Leave events interrupt care a person is or should receive, often these events are associated with increased readmissions,(3) which impacts on ongoing medical care and increase morbidity and mortality. This review found a variety of factors associated with, and reasons for leave events including; loneliness, waiting too long, distrust in the health system, racism, culturally unsafe institutions, miscommunication and misunderstandings, isolation and loneliness, family and social obligations, gender, age group of the patient, remoteness of hospital or residential location, and state or territory.(3)

This review focuses on leave events for all Australians. However, given the continued inequities (i.e. reduced life expectancy, chronic conditions) and marginalisation Aboriginal and Torres Strait Islander peoples face from ongoing colonisation, systemic racism, lack of trust and autonomy, Aboriginal and Torres Strait Islander people are at higher risks of leave events than other

Australians.(3-5) Given the sovereign health rights of Aboriginal and Torres Strait Islander peoples, it was critical to ensure that this was captured in this review.

This systematic literature review sought to answer questions on the causes contributing to leave events, the evidence-based preventative measures that have been or could be implemented to reduce leave events and to describe any additional terms and definitions used for Leave Events by states and territories in Australia.

Methods

This systematic literature review was conducted between 27 May and 30 June 2020. It included Australian studies published from January 2013. Publications were considered and included if they reported on primary research which focused on Aboriginal and Torres Strait Islander peoples and other Australians who leave health services, this included acute health services, Aboriginal community-controlled health and medical services, community services or primary care health services prior to being seen by a medical professional or having left against medical advice. Additionally, any other possible definitions in relation to leave events used by Australian health and medical services that may not be already outlined in the search terms were included when found while conducting the search. Included papers were summarised using a qualitative synthesis and were independently reviewed by two authors (JC and SS) with a unanimous agreement as to which papers were to be included.

Search terms also included the many different terms that can be used to refer to Aboriginal and Torres Strait Islander peoples such as: Indigenous, First Australian, Murri, Koori, and Noongar (Table 1).

Data was obtained on the prevalence and incidence rate of leave events, or any similar terms for Aboriginal and Torres Strait Islander peoples who present to acute health service organisations, Aboriginal community-controlled health services, Aboriginal medical services, community services and primary care services. Causes that contribute to leave events for Aboriginal and/or Torres Strait Islander peoples and other Australians were identified. Any additional terms and definitions used for leave events by states and territories not already listed was also searched.

Inclusion Criteria

Studies were included in the review if they addressed:

- Australian Aboriginal and/or Torres Strait Islander people across all ages
- findings were from primary research (both quantitative and qualitative)
- the data sources (e.g. interview, survey, focus group, hospital databases)
- “leave events” causes for Aboriginal and/or Torres Strait Islander children (≤18 years of age)
- intervention-based studies that had been implemented to reduce Aboriginal and/or Torres Strait Islander people and other Australians who leave the health or medical service or have left against medical advice.

Exclusion Criteria

Studies were excluded if they:

- Did not focus on Australian or Aboriginal and Torres Strait Islander people
- Included routine discharge or negotiated/agreed discharge
- Included discharge for the day programs and instances of ‘did not attend’
- Did not include the search terms in title or abstract.

Both quantitative and qualitative research designs were included in the search. Two methods were used to locate relevant studies: (a) a search of databases for primary papers using the OVID Medline and Google Scholar platforms (b) A hand search of references from identified studies. Once the search had been conducted, duplicates were removed and the title and abstract of the remaining articles were screened for inclusion. EndNote software was used to manage references.

Assessment of included papers

Included papers were assessed using the Mixed Methods Appraisal Tool (MMAT).(6) The MMAT has previously been shown to be a comprehensive tool for assessing mixed method studies and meets the accepted standards for validity and reliability. Where possible, a qualitative synthesis was conducted that was dependant on the assessment of individual qualitative based articles and a quantitative meta analyses for quantitative studies.

Quality of studies

The quality of included studies varied. Of the 11 studies, one had a MMAT score of * (25%),(5) six studies were scored at **(50%), (2-4, 7-9) three scored ***(75%),(10-12) and one paper that included patient interviews and scored ****(100%)(1) using the MMAT tool resulted in an overall methodology score which was then calculated into a percentage.

Results

Search Results

The electronic database search returned 30 relevant records and 9 additional records were identified by a manual search in Google Scholar. Reference lists of the included articles were searched. After assessing the records for relevance, 29 references were saved, and full texts were obtained and reviewed for relevance to the research questions. Duplicates were removed, and titles and abstracts were reviewed to select studies. Preselected full-text studies were screened by two (JC and SS) reviewers independently, to identify studies according to inclusion criteria. This systematic literature review was reported in accordance with the PRISMA (preferred reporting items for systematic reviews and meta-analysis) reporting guidelines provided for systematic reviews and meta-analyses. (PRISMA Figure 1)

Data was extracted, and study findings and characteristics were synthesised in a narrative summary. From these articles, 11 met the inclusion criteria for the review. Of these 5 were based in New South Wales, 2 in Western Australia, 1 from Queensland, 1 from Northern Territory and 2 were conducted nationally. Included studies were appraised for quality using MMAT (Table 2).

Terminology

Terminology for leave events in Australia are used generally to specify when a person has left a health service prior to being seen by a health professional or have left against medical advice. However, there are many inconsistencies in the use of this terminology as each state and territory define leave events differently. Terminology for leave events can also vary depending on the location a person presents, for example to an emergency department compared to being admitted as a patient.

Leave events are noted by the national organisation, Australian Institute of Health & Welfare (AIHW) as TOL), 'incomplete emergency attendances', 'discharge from hospital against medical advice'. In Western Australia leave events are termed as 'take own leave', (TOL), 'did not wait to receive treatment' (DNW), 'abscond' or 'go missing', 'self-discharge', 'leave at their own risk' (LOR), 'away without leave' (AWOL) or 'discharge against medical advice' (DAMA). NSW record leave events as 'take own leave' (TOL), 'did not wait' (DNW), 'discharge against medical advice' (DAMA) and 'left at own risk' (LOR).

The Northern Territory use 'discharge/leave against medical advice within 48 hours' (DAMA/LAMA), 'discharge against medical advice' (DAMA), 'self-discharge', 'absconding', 'taking own leave' (TOL) and 'away without leave' (AWOL) for leave events. Tasmania and Victoria are the only states that use CODE Z which means left against medical advice. South Australia document leave events as 'inpatient discharge against medical advice' and 'left emergency department at own risk'. Queensland use a code for leave events but is different to TAS and VIC which is Code 07 'discharged at own risk'. Finally, Australian Capital Territory use 'patient who did not wait to be seen'.

Prevalence of 'leave events'

Leave events rates for Aboriginal and Torres Strait Islander people are seven times more than that of other Australians.(13) There are several contributing and interrelated factors as mentioned in the background of this review, associated with leave events that

cause Aboriginal and Torres Strait Islander peoples to leave a healthcare facility before treatment or during treatment. Several recommendations from evidenced based studies could be implemented across Australian healthcare services to address this.(1, 3, 10, 11, 13)

The Australian Institute of Health and Welfare collected national data using the National Hospital Morbidity Database for years 1998–99 to 2012–13 and found that leave events for Aboriginal and Torres Strait Islander patients have increased.(14) Hospitalisation for injury and poisoning had the highest rates of leave events for Aboriginal and Torres Strait Islander peoples compared to other Australians.(4) The greatest difference between Aboriginal and Torres Strait Islander peoples and other Australians was in endocrine, nutritional and metabolic disorders. Other contributing factors identified were Indigenous status and remoteness of hospitals.(4)

While it is established that the prevalence and rate of leave events is higher among marginalised communities such as culturally and linguistically diverse (CALD), and children 0-16 years,(11) similar patterns are also seen in Aboriginal and Torres Strait Islander children. A retrospective cohort study by Gardner in 2016 indicated that urban Aboriginal children 0-16 years were more likely to be reported as discharged against medical advice than other Australian children.(15)

In a study by Gardner et al., routinely collected medical data between January 2007 and December 2012 were analysed and the findings showed that patients' medical records were incomplete and not being recorded by clinical staff. Although comprehensive quality routine data can help to identify service gaps experienced by patients and families, this was not possible due to the incomplete records.(7)

Remote rehabilitation service uptake by male Aboriginal patients was studied by Munro in 2018. It is noted that 47% Aboriginal patients at a remote NSW drug and alcohol rehabilitation centre self-discharged without completing the program.(8) This finding is aligned with the study by Katzenellenbogen et al. (2013) that revealed leave events are more common among Aboriginal and Torres Strait Islander peoples in rural and remote areas. Munro's analysis of the patients' admissions from 2011 to 2016 showed that patients referred from the criminal justice system were more likely to self-discharge.(8) It is known that discharge against medical advice in adult general population leads to increased risks of re-admission,(3) but Munro could not establish the same pattern in remote Aboriginal male patients due to unavailability of follow-up data.(8)

Causes of 'leave events'

In a study conducted by Einsiedel et al factors that predicted leave events included: loneliness, taken by family, payday, attending court, the football, feeling better, staff mistreatment; staff speaking 'roughly' and waiting too long. Einsiedel et al also found that in the Northern Territory, Aboriginal and Torres Strait Islander people with medical conditions that appeared to "get better" before completing treatment and left the healthcare facility were documented to have been discharged against medical advice or recorded as 'non-compliant'.(1) However, most had little understanding of their illness and there was a lack of clear and culturally appropriate communication from health providers explaining the potential consequences of leaving before treatment is completed.(1) Findings from Einsiedel et al suggested that Aboriginal people who live in the Central Dessert continue to fear hospital settings and believe they are connected to death. Another issue identified was not being able to go back on Country so patients who have a terminal illness prefer to leave the hospital in order to be able to die on Country.(1)

A systematic review by Shaw revealed that experiences of racism, distrust of the health system, a lack of culturally safe institutions, miscommunication and misunderstandings, feelings of isolation and loneliness, family and social obligations as well as remoteness of hospital from usual residence all contributed to leave events.(3) Shaw's review included a study by Katzenellenbogen that indicated acute healthcare settings are not effective at addressing the apprehensions of Aboriginal and Torres Strait Islander patients in order to maintain patient's engagement in their follow up treatment.(9)

The cross-sectional analytical study undertaken by Katzenellenbogen in Western Australia showed the risks associated with leave events were unique to Aboriginal and Torres Strait Islander patients compared with other Australians, although, the study also identified that drug and alcohol dependency associated with leave events was a strong predictor for both Aboriginal and Torres Strait Islander patients and other Australians. The study found that Aboriginal and Torres Strait Islander patients leave events were unique due to culturally distinct personal and systemic factors associated with negative experiences from hospital and

mainstream institutions. The study had consistent findings with other studies in this review of leave events for Aboriginal and Torres Strait Islander patients that were associated with a lack of cultural safety and culturally appropriate care, personal and institutionalised racism, miscommunication, family and social commitments, isolation and loneliness.

The Western Australia Department of Health conducted a review in 2018 of relevant and current policies on leave events. The Aboriginal Health Policy Directorate (AHPD) held consultations with Health Service Providers, Aboriginal Health Council WA (AHCWA), Health Consumers' Council (HCC), WA Primary Health Alliance (WAPHA), Mental Health Commission (MHC) and key senior WA Health staff. Through these consultations many common themes were identified as causes for leave events for Aboriginal and Torres Strait Islander patients. Common themes included systemic racism and stereotyping, distrust of health services, not enough Aboriginal workforce, lack of appropriate communication and language barriers, family, cultural and social commitments, alcohol and other drugs, mental health issues, admission and discharge procedures being slow and complicated. (2)

In a retrospective cross-sectional study by Sealy et al in 2019, leave events among Aboriginal and Torres Strait Islander children compared with other Australian children 0-14 were analysed from a 5-year inpatient admissions dataset. The Bayesian multivariable logistic regression analysis was used to determine the predictors of leave events in admissions. This study did not assess the reasons of leave events for Aboriginal children but drew on other studies that stated it could be due to distrust in the health system, lack of cultural safety, staff attitudes, hospital policies and racism. The study also highlighted the probable under identification of Aboriginal or Torres Strait Islander status which may be due to fear of racist treatment and the historical practice of removal of children during hospital stays.(12) While many authors tried to discover predictors for leave events in Australian hospitals from medical datasets,(3, 9, 11, 12) little evidence is available from robust qualitative exploration of Aboriginal patients' experience. A summary of causes is represented in Table 1.

Preventative Measures

The Aboriginal Health Policy Directorate 2018, Western Australia Department of Health found a number of preventative measures to reducing leave events outlined within this section.(2) These included the need for health systems to be responsive through effective cultural competency which could be achieved through increased cultural training of hospital staff on connection to country, kinship and family obligations.(16) It was found that to be effective this training must be mandatory and ongoing. Cultural training models need to be developed to address the individual service and community settings according to locally identified priorities.(16)

Other preventative measures that were explored in the paper found that the implementation of a 'living document' such as a 'Cultural Security/Safety Policy/Framework', developed in collaboration with Aboriginal and Torres Strait Islander stakeholders, policy makers and communities can improve the appropriateness and safety of healthcare. Improving the hospital environment through policy changes to accommodate family members to stay with the patient during their admission was also recommended. (16)

Pathways between hospital and community care providers need to be developed in collaboration with Aboriginal and Torres Strait Islander communities and community controlled Aboriginal Health Services to enable appropriate healthcare within their community. Culturally safe and appropriate environments during pre-admission processes for Aboriginal and Torres Strait Islander patients were also found to be important for patients to feel welcome and comfortable. The availability of an Aboriginal health Worker/Liaison Officer to address the concerns of culture early in their admission was also found to build a trusting environment.(3)

Another preventative measure outlined Aboriginal community-controlled health services involvement in equipping patients with information about hospital processes and what to expect when they attend the healthcare service.(2) Establishing partnerships and protocols with Aboriginal stakeholders to improve coordination and continuity of care between health services and community-controlled health services was deemed important. Two-way communication between Aboriginal community-controlled health services healthcare services and effective engaging patients and carers in the design and plan of programs and services can improve patient's quality of care.(2)

Discussion

The purpose of this systematic literature review was to examine the causes that contribute to leave events from health care services and understand the current recommendations that may reduce rates of leave events for Aboriginal and Torres Strait Islander people and other Australians. This study established that there are numerous causes that contribute to Aboriginal and Torres Strait Islander patient leave events.(2, 3, 11) Many of the studies and reports repeated themes such as systematic and personal racism, distrust of hospitals and patients feeling misunderstood and unwelcome. Other themes such as the lack of cultural competency, cultural safety in hospital and cultural training among the health workforce were recurrent. Systemic and personal racism needs to be addressed if equity is to be achieved in the healthcare system.(17) Improving the cultural competence of health services and creating culturally safe environments will help address racism, and feelings of being unwelcome.(2)

Health service policies and procedures continue to be developed from a western biomedical worldview, which reinforces colonial power structures, and invisible whiteness in the Australian healthcare system and continue to marginalise Aboriginal and Torres Strait Islander peoples.(17) A change in institutional policies to balance the inequitable power structures is needed. Genuine engagement of Aboriginal and Torres Strait Islander stakeholders can change the policy structures to ensure that Indigenous Knowledge is central, which will support systematic.(2)

Limitations And Strengths

There is difficulty in ascertaining the exact factors on leave events for Aboriginal and Torres Strait Islander people in Australia due to the limited previous research. The evidence that currently exists is mainly through quantitative analysis of hospital data. A strength of this systematic review was that it was led by a First Nation researcher, ensuring the included studies were viewed through the lens of a First Nation perspective.

Conclusions

Higher prevalence and incidence rates of leave events among Aboriginal and Torres Islander patients in comparison to non-Aboriginal Australians indicate that there are unique individual and system factors driving the problematic issue. While attempts are made to understand the causes, most research efforts are focused on quantitative studies and a lack of robust qualitative exploration of the patients' experiences exists. The causes and preventative measures from the literature highlight the needs of effective cultural competency, culturally appropriate holistic models of healthcare and Aboriginal community-controlled health services involvement. Consistent terminology and appropriate terms to define leave events across states and territories within Australia will also ensure better data capture. Further research on how to improve treatment completion rates for Aboriginal and Torres Strait Islander patients could provide evidence on patient’s experience and therefore practical strategies to reduce leave events. health service organisations.

Abbreviations

TOL Take on leave

DNW Did not wait

LOR Leave at own risk

MMAT Mixed methods appraisal tool

QUAL Qualitative

QUAN Quantitative

MM Mixed Methods

AIHW Australian Institute of Health & Welfare

CALD Culturally and linguistically-diverse

AHPD Aboriginal Health Policy Directorate

AHCWA Aboriginal Health Council of Western Australia

WA Western Australia

HCC Health Consumers Council

WAPHA Western Australia Primary Health Alliance

MHC Mental Health Commission

RPH Royal Perth Hospital

ACSQHC Australian Commission on Safety and Quality in Health Care

NSQHS National Safety and Quality Health Service

PRISMA Preferred reporting items for systematic reviews and meta-analysis

Declarations

Ethics approval and consent to participate

Not Applicable

Consent for publication

Not Applicable

Availability of data and materials

Not Applicable

Competing interests

The authors declare that they have no competing interests.

Funding

We received funding from the Australian Commission on Safety and Quality in Health Care to develop a report to support their work in relation to reducing leave events for Aboriginal and Torres Strait Islander peoples from which this review is informed.

Authors' contributions

JC, SS, TM, MB, NE, CR, KH, BP, EB, KBB developed the concept of the systematic review. JC conducted the systematic review and the initial title and abstract screening. JC and SS reviewed papers and had unanimous agreement as to which papers were to be included. JC and SS drafted the review and TM, MB, NE, CR, KH, BP, EB, KBB critically revised and approved the manuscript.

Acknowledgements

First Nations peoples of Australia

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Tables

Table 1 Search Terms.

Health services	Population	Life course	Leave terms
1. Health care	1. Indige*	1. Child*	1. Discharged against medical advice (DAMA)
2. Aboriginal health services	2. Aborigin*	2. Paediatric	2. Take Own Leave (TOL)
3. Community health services	3. Torres Strait Islander	3. Adolescents	3. Absent without leave (AWOL)
4. Aboriginal medical services	4. Nunga	4. Toddlers	4. Did not wait (DNW)
5. Primary health care services	5. Koori	5. Babies	5. Left at own risk (LOR)
6. Tertiary care	6. Koorie	6. Adults	6. Left against medical advice (LAMA)
7. Acute health service organisations	7. Murri	7. People*	7. Discharge at own risk (DOR)
8. Aboriginal community-controlled health services	8. Nyoongar	8. Parents	8. Away without leave
9. Hospital	9. Anangu		9. Self-discharge
10. Clinic*	10. Bining		10. Treatment refusal
11. Outpatient*	11. Yolngu		11. Patient dropouts
12. Local health network	12. Palawah		12. Refusal to participate
13. Local health district	13. Arrente		13. Treatment Adherence and Compliance
14. Primary Health Network	14. First Nation		14. Health Services Accessibility
15. Emergency department	15. First Australian		15. Separations from health services
	16. First People		16. Frequent presenters
	17. Australia*		17. Revolving door
	18. Patient*		18. Procedure not carried out because of patient's decision for reasons of belief and group pressure
	19. Client*		
	20. Consumer*		

Table 2 Mixed method appraisal tool (MMAT) summary for eligible articles from 2013 to 2020.

#	Author, Date, Country	Aims	Methods	Participants and setting	Analysis	Key findings	MMAT Scores
1	*Aboriginal Patient Take Own Leave. Review and recommendations for improvement* Department of Health Western Australia, Perth 2018	This paper is intended as a guide for Health Service Providers and other stakeholders to assist them in addressing TOL for Aboriginal patients	Health Policy	Aboriginal and Torres Strait Islander people	Consultation	Existing programs are being implemented across the WA health system that either directly aim to improve TOL rates for Aboriginal people or have an indirect positive flow on effect of the same.	**
2	*Aboriginal and Torres Strait Islander Health Performance Framework 2014 report: detailed analyses. Discharge against medical advice.* *Australia* Australian Institute of Health and Welfare	This report provides information on a range of measures of health status, determinants of health and the health system performance relating to Aboriginal and Torres Strait Islander people.	Government Report	All Aboriginal and non-Aboriginal people admitted in essentially all hospitals in Australia	Multivariate logistic regression analysis	Between 2011–13 There were 17,494 hospitalisations for Indigenous Australians where the patient left hospital against medical advice or was discharged at their own risk. This study has statistical data but no understanding of why the numbers are so high.	**
3	*An evidence-based approach to reducing discharge against medical advice amongst Aboriginal and Torres Strait Islander patients.* Caitlin Shaw 2016, Australia	Identifying what is the prevalence of self-discharge in the Aboriginal and Torres Strait	Systematic review on studies in or before 2015	Aboriginal and Torres Strait Islander people in Australia	A Brief for the Deeble Institute	Study found improvements are needed in these areas: –Cultural safety frameworks in hospital -Cultural competency in acute care -Nationally recognised scope of practice for AHWs/ALOs -Increased recruitment and retention of AHWs/ALOs in acute care. -Development of more flexible community-based care models to provide culturally appropriate care for Aboriginal and Torres Strait Islander patients	**

#	Author, Date, Country	Aims	Methods	Participants and setting	Analysis	Key findings	MMAT Scores
4	Diagnostic Report: Understanding contributing factors for Take-Own-Leave in NSW Health organisations Clinical Excellence Commission and NSW Centre for Aboriginal Health May 2020	Consultations focused on clinician and expert perspectives about the contributing factors for Take-Own-Leave and how they would like to improve the provision of care for Aboriginal peoples	Report	Aboriginal people in New South Wales	Interviews and extensive literature review	Through the consultation process and literature review ten main themes, for Take-Own-Leave, could provide a basis for further programs of work. Each theme links to all four levels of responsibility for action: the system, the organisation, the community and the individual.	***
5	*Discharge against medical advice in culturally and linguistically diverse Australian children* Xin Yue Guo, 2019 Sydney, NSW	The study measured the prevalence and rates of discharge against medical advice in culturally and linguistically diverse children in Sydney Children's Hospital Network.	Cross-sectional study	Culturally and linguistically diverse children (n=192 037), outpatients (n=268 904) and between2015 and 2018 for emergency department (ED) patients (n=158 903).	Prospectively collected data between 2010 and 2018 which was extracted from electronic medical records	Study found that being from a CALD background places children at increased risks to DAMA. Implementing appropriate health service responses may ensure equitable access and quality care for children from CALD backgrounds to reduce the rates of DAMA and its associated ramifications.	***

#	Author, Date, Country	Aims	Methods	Participants and setting	Analysis	Key findings	MMAT Scores
6	*Picture of the health status of Aboriginal children living* *in an urban setting of Sydney* Suzie Gardner, 2016, Sydney NSW.	(1) Describe the health status and health indicators for urban Aboriginal children (age 0–16 years) in south-east Sydney (2) Compare state and national health indicators (3) Evaluate the quality of routinely collected clinical data and its usefulness in monitoring local progress of health outcomes.	Retrospective cohort study	Urban Aboriginal children 0-16 years Setting: south-east Sydney	Analysis of clinical records from Aboriginal maternal and child data from multiple databases, between January 2007 and December 2012.	Aboriginal children were more likely to be discharged from hospital against medical advice than non-Aboriginal children. Routinely collected data did not include some information essential to monitor determinants of health and health outcomes.	**
7	*Predictors of Discharge Against Medical Advice in a Tertiary Paediatric Hospital.* Louise Sealy 2019, Sydney, NSW.	To identify the demographic and clinical characteristics of DAMA patients from a paediatric hospital in Sydney	Retrospective cross-sectional	All Australian children	Data extracted retrospectively from electronic medical records over a 5-year period	This study found clear predictors of DAMA in this tertiary hospital admission cohort. Identifying these provides opportunities for intervention at a practice and policy level in order to prevent adverse outcomes. They found that Aboriginal children had a higher rate of DAMA for various reason.	***
8	*Self-discharge by Adult Aboriginal Patients at Alice Springs Hospital, Central Australia: Insights from a Prospective Cohort Study* Lloyd J. Einsiedel, 2013, Alice Springs, NT.	To determine rates and risk factors for self-discharge by Aboriginal medical inpatients at Alice Springs Hospital.	Prospective Cohort study. Patient interviews.	Participants: 202 Aboriginal adults in the General Medical Unit, Alice Springs Hospital	Statistical analyses of data between 2006 to August 2007.	Study found that there were many and varied reasons for self-discharged such as loneliness, taken by family, payday, attending court, the football, feeling better, staff mistreatment; staff speaking 'roughly' and waiting too long.	****

#	Author, Date, Country	Aims	Methods	Participants and setting	Analysis	Key findings	MMAT Scores
9	*Understanding remote Aboriginal drug and alcohol residential rehabilitation clients: Who attends, who leaves and who stays?* Alice Munro, 2017, North West, NSW.	To describe characteristics of clients at remote Aboriginal residential rehabilitation service through examining 5 years of data of a remote Aboriginal residential rehabilitation service for substance misuse patients.	Prospective Cohort study	All Aboriginal men aged over 18yrs in rehabilitation from 2011 to 2016 (N=329).	Retrospective analysis of 329 clients.	Nearly half (47%) of clients self-discharged from the program. Key recommendations include co-design model of care, standardise data collection and routine follow-up clients to monitor treatment effectiveness.	**
10	*Unplanned readmission or death after discharge for Aboriginal and non-Aboriginal people with chronic disease in NSW Australia: a retrospective cohort study.* Amanda Jayakody 2018, NSW.	To examine whether rates of unplanned 28-day hospital readmission, or death, significantly differ between Aboriginal and non-Aboriginal patients in New South Wales, Australia, over a nine-year period.	Retrospective cohort	674, 365 hospital episodes of care for Aboriginal and non-Aboriginal patients	Sample of de-identified linked hospital administrative data. Analyses was retaining diagnosis codes and admission data from the first episode of each separation.	Aboriginal people admitted to an acute facility in NSW public hospital between 30th June 2005 and 1st July 2014	*
11	*Voting with their feet - predictors of discharge against medical advice in Aboriginal and non-Aboriginal ischaemic heart disease inpatients in Western Australia: an analytic study using data linkage* Judith M. Katzenellenbogen, 2013, Western Australia.	To investigate demographic and clinical factors that predict DAMA in patients experiencing their first-ever inpatient admission for ischaemic heart disease (IHD).	Cross sectional study	Participants were all first-ever IHD inpatients aged 25–79 years admitted between 2005 and 2009, selected after a 15-year clearance period and who were discharged alive. N=37,304 (Aboriginal 1602, non-Aboriginal 35702) from WA hospitals.	Analysis of linked hospital and mortality data	Study found the strongest predictors of DAMA are emergency admissions, history of alcohol admission and Aboriginality.	**

Figures

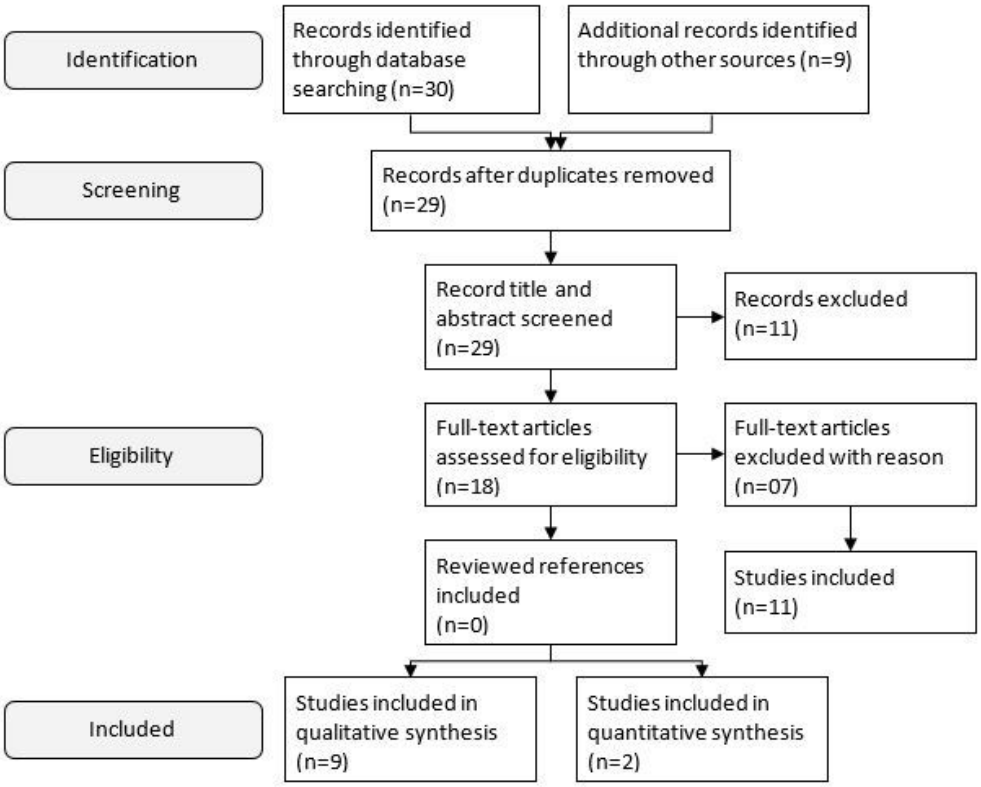

Figure 1

Prisma Flow Chart

Supplementary Files

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