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Rapid Evidence Scan

Transfer of care programs focusing on Aboriginal people

An Evidence Check rapid review brokered by the Sax Institute
for the Agency for Clinical Innovation — June 2018

A Rapid Evidence Summary brokered by the Sax Institute for the Agency for Clinical Innovation. June 2018.

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Contents

Acronyms and abbreviations

ACAT	Aged Care Assessment Team
ACCHS	Aboriginal Community Controlled Health Service
ACI	Agency for Clinical Innovation
ACRA	Australian Cardiovascular Health and Rehabilitation
ALO	Aboriginal Liaison Officer
AMS	Aboriginal Medical Service
AHW	Aboriginal Health Worker
AMS	Aboriginal Medical Service
CHD	Coronary Heart Disease
CPD	Continuing Professional Development
CR	Cardiac Rehabilitation
CVD	Cardiovascular Disease
GBACC	Getting Better at Chronic Care
GP	General Practitioner
HACC	Home and Community Care program
IHW	Indigenous Health Worker
MDT	Multidisciplinary Team
MGP	Midwifery Group Practice
NACCHO	The National Aboriginal Community Controlled Health Organisation
NHMRC	National Health and Medical Research Council
POCT	Point of Care Test
RCT	Randomised controlled trial
WA	Western Australia
WACHS	Western Australian Country Health Service

Executive Summary

Background

Transfer of care initiatives aim to improve the transfer of care for Aboriginal patients to and from acute settings (hospital) and back to primary care (GP and community). This has been identified as a priority area by ACI to drive innovation and improve health outcomes for Aboriginal people. This review sought to identify promising models of service delivery for transfer of care initiatives within NSW and Australia that have been designed and implemented with an Aboriginal lens to meet the needs of Aboriginal communities.

Review Question

What transfer of care initiatives, with a focus on Aboriginal population, have been implemented in Australia?

Methods

To answer the review question, rapid but systematic searches were conducted of both the peer reviewed and grey literature. For the peer reviewed literature, we searched Medline, the Cochrane Library and Informit, with Informit providing access to 17 Aboriginal specific health related databases.

Results

We identified a total of seven peer reviewed publications that met the inclusion criteria for the review, only one of which directly focused on transfer of care. The remaining reports were identified through the grey literature search. Four of the seven papers reported patient perspectives.

Only one pathway explicitly examined transfer of care between hospital and acute services.[1] The remaining six papers identified pathways of care, within which mechanisms to support effective care transfer were outlined.[1-4, 6, 7] Four studies focused specifically on Aboriginal populations[2, 3, 6, 7] while the remaining papers reported mainstream services with Aboriginal focused elements. All seven studies identified the role of Aboriginal Health Workers (AHWs) in supporting continuity of care. All but one study described multi-component strategies or pathways of care.

Across the studies, barriers and facilitators to successful pathways of care were identified. Barriers included: health service system complexity; a lack of clear, established and well understood pathways that are consistently promoted to providers; a lack of an appropriately trained and coordinated workforce and of clear roles and responsibilities. Many practitioners were unaware of best practice guidelines and of the required number and type of visits needed in the patient journey. Limited resources were often cited as a barrier to achieving efficient and appropriate care i.e. employing enough people who are appropriately trained and funded to oversee services and patients. Local referral pathways were perceived as an enabler. The roles of Aboriginal Health Workers (AHWs) were consistently highlighted.

More detailed are provided about care pathways and transfer of care mechanisms in the Findings below (page 8) and in Appendix C (page 24).

Background

Aboriginal people suffer from a higher burden of chronic diseases and experience higher rates of hospital admissions compared to the general population, including potentially avoidable and unplanned admissions or readmissions. Given this, continuous coordinated care is crucial.

Transfer of care initiatives aim to improve the transfer of care for Aboriginal patients to and from acute settings (hospital) and back to primary care (GP and community). This has been identified as a priority area by ACI to drive innovation and improve health outcomes for Aboriginal people. This review sought to identify promising models of service delivery for Transfer of care initiatives within NSW and Australia that have been designed and implemented with an Aboriginal lens to meet the needs of Aboriginal communities.

This review has been guided by the following question:

What transfer of care initiatives, with a focus on Aboriginal populations, have been implemented in Australia?

Methods

We conducted a systematic search of both the peer reviewed and grey literature to inform this Rapid Evidence Summary.

Peer reviewed literature search

We searched three health databases: Cochrane, Medline, and Informit. We selected 17 databases within Informit that were specific to Aboriginal Health. These were AGIS-ATSIS, AHB-ATSIS, AIATSIS, AMI, APAIS-ATSIS, ATSIhealth, AusportMed, DRUG, FAMILY-ATSIS, FNQ, Health & Society, Health Collection, HIVA - HIV/AIDS, Indigenous Australia, Indigenous Collection, MAIS-ATSIS, and RURAL. Full information about these databases is recorded in Appendix A.

We used combinations of search terms aligned to the key concepts and outlined in Table 1 below. The searches were conducted on 26 and 27 April.

Table 1 Search terms

Field 1	Field 2	Field 3	Field 4	Field 5	Field 6	Field 7
Aboriginal OR Indigenous OR "Torres Strait"	Transition to community OR Integrated care OR continuity of care	Program OR intervention OR strategy	Hospital discharge Discharge plan* Readmission	Australia	Combine Fields 1 and 5 with AND	Combine Fields 2, 3 and 4 with OR

Combine fields 6 and 7 with AND Limit from 2013 to present and English full text only

The searches yielded a total of 240 papers, of which 133 were removed as duplicates. The final set of 107 papers were the screened for inclusion using the criteria outlined in Table 2. A PRISMA flow chart of this process is located in Appendix B. After title and abstract screening, 85 papers were excluded leaving 22 papers for full text review. On reviewing full text, a further 15 papers were excluded, leaving 7 papers for inclusion in the analysis. Data from these papers was extracted into tables, which are provided in Appendix C.

Table 2 Search strategy inclusion criteria

Inclusion	Exclusion
• Australian Aboriginal or Torres Strait Islander people • Focused on a program, initiative or service • Program focus is transfer of care or pathways of care describing mechanisms supporting transfer of care	• Not focused on a program, service or initiative • Focused solely on in-hospital or in-community care • Population included Aboriginal people but no other information given • Full text not available

Grey literature search

The grey literature search consisted of a review of a number of pre-specified jurisdictional websites as outlined in Appendix D. We also conducted a search of the first 10 pages of Google using combinations of the search terms specified in Table 1. The search identified 14 pieces of grey literature for review.

Findings

What transfer of care initiatives, with a focus on Aboriginal populations, have been implemented in Australia?

A total of seven peer reviewed publications met the inclusion criteria for this review. Detailed information for each of the studies is provided in Appendix C.

Of the seven studies, one was a protocol for a randomised controlled trial[1] and one study had had not been evaluated.[2] The remaining studies included a mixed method before and after cohort study;[3] and mixed methods or qualitative interview studies.[3-6]

The programs described in the studies focused on: maternity and perinatal care; [3, 6] cardiac rehabilitation and secondary prevention;[4] hospital-based care for people with chronic diseases;[1] eye care;[7] mental health and wellbeing;[2] and self-discharge.[5]

Only one pathway explicitly examined transfer of care between hospital and acute services.[1] The remaining six papers identified pathways of care, within which mechanisms to support effective care transfer were outlined.[1-4, 6, 7] Four studies focused specifically on Aboriginal populations[2, 3, 6, 7] while the remaining papers reported mainstream services with Aboriginal focused elements. All seven studies identified the role of Aboriginal Health Workers (AHWs) in supporting continuity of care. All but one study described multi-component strategies or pathways of care.

As only one of the included papers examined transfer of care specifically,[1] we have sought to describe in detail other pathways of care that support continuity of care and transition between acute and community services. We have also highlighted where possible the mechanisms that support transfer of care within each pathway.

The findings of this rapid review are reported under the following headings:

- Studies focusing on transfer of care
- Studies focusing on care pathways
- Early intervention principles

Across the studies, barriers and facilitators to successful pathways of care were identified. Barriers included: the service system complexity; a lack of clear, established and well understood pathways that are consistently promoted to providers; a lack of an appropriately trained and coordinated workforce and of clear roles and responsibilities. Many practitioners were unaware of best practice guidelines and of the required number and type of visits needed in the patient journey. Limited resources were often cited as a barrier to achieving efficient and appropriate care i.e. employing enough people who are appropriately trained and funded to oversee services and patients. Local referral pathways were perceived as an enabler.

Peer reviewed literature

1 Programs focusing on transfer of care

Diplock et al (2017) provide a protocol for a randomised controlled trial comparing a tailored, multidimensional transitional care package to usual care. Although the study is yet to be completed, the model is sufficiently described for inclusion in this review. The study will be conducted through Alice Springs Hospital where the majority of patients are Aboriginal Australians.[1]

Under the proposed model, patients in the intervention arm will be identified within 48 hours of admission to hospital under an adult general medical or surgical team. In addition to usual care in the form of discharge planning, education and referral to allied health services, patients in the intervention will receive a multi-dimensional and case-based transitional care package headed by a multidisciplinary team.

Intervention care pathway post-acute care admission to Alice Springs Hospital[1]

The intervention care pathway activities include: (1) A needs based assessment; (2) Coordination of referrals to allied health, social work, mental health and addictions services; (3) Education for patients and families about diagnosis and management with support by AH Practitioners and Interpreters; (4) Full medication review and education by a pharmacist; (5) Case conferencing to create an appropriate management plan which is sent to a designated worker in the local primary health care service; (6) Liaison with local primary healthcare providers; (7) A written care plan given to the family and a designated primary healthcare worker; (8) Post discharge coordination and continuity of care, supported by case conferencing with the patient, family and provider, with review by the primary health care team within 7 days and support for participants if they return to hospital.

Mechanisms supporting transfer of care include **referral, a management plan** sent to a **designated** primary health care worker, and ongoing **case conferencing.**

The study investigators propose that the actions identified most likely to reduce readmission will include improved patient and family education and community-based support, pre-discharge planning and community and primary health care-based liaison, early follow-up and continuous chronic disease treatment/management.[1]

2 Programs focusing on pathways of care

Two studies examined the care pathway used by the **Enhanced Midwifery Group Practice (MGP)** in the Northern Territory.[3, 6] The MGP commenced in 2009 and focused on remote dwelling Aboriginal women. The MGP underwent a clinical redesign of maternity services in two large remote communities approximately 500 kilometres from Darwin. The new program tested by the MGP employed a woman-centred model of care for women of all risk statuses. It aimed to improve quality of care within a sustainable and culturally responsive caseload model of maternity care. Through the MGP, women receive routine pregnancy care in their community with a remote area nurse/midwife or remote outreach midwives who visit from the regional centre as needed and a locally based General Practitioner or specialist outreach obstetric service which visits three or four times a year. The program focuses on "5Cs" as priority areas for action: communication, choice, collaboration and improving continuity and coordination of care.

Enhanced midwifery support care pathway[3, 6]

The care pathway focused on increasing continuity of carer, communication, choice, collaboration and coordination of care. It consisted of the following (1) antenatal care provided in the remote community

with the provision of full-time designated midwifery and child health positions with no routine nursing duties; (2) transport to and from Darwin using patient assistance transport scheme funding, airfares and accommodation; (3) antenatal care in three sites in Darwin before birth, including in a shopping centre, with women assigned a primary midwife (introduced to women by the use of photos); AHWs providing support, care, continuity and education in Darwin; and access to specialists as required; (4) birth at the Royal Darwin Hospital, with birthing services provided by the primary or back up midwife in either the delivery suite or the birth centre if women met the eligibility criteria and elected a birth centre birth; (5) postnatal care in Darwin provided by MGP midwives in their hostels or other accommodation or in the shopping centre; (6) postnatal care provided in remote community provided by designated midwives.

Transfer of care mechanisms included: **continuity of midwife** and back up midwife before, during and after birth; **care coordination** across multiple providers; **referral** to specialist services; **partnerships** with Aboriginal Health workers.

At the time of the study, the program was resourced by two midwives, one coordinator, two AHWs who were enrolled midwifery students, a senior Aboriginal woman from a remote community, an administrative officer and two midwifery holiday relievers. The senior Aboriginal woman was employed through the "Strong women, strong babies, strong culture" program to provide cultural support.

Kildea et al (2016) conducted a mixed methods cohort study comparing the quality of care before and after implementation of the clinical redesign of maternity services. Following the intervention, compared to the baseline cohort, fewer women in the MPG had less than four visits in pregnancy (14% vs 8%); a higher proportion of women had routine antenatal tests recorded (85% vs 97%) and there were improved screening rates for urine and sexually transmitted diseases. The treatment of conditions as per recommended guidelines worsened in some areas, such as treatment of urinary tract infections with antibiotics and treatment for anaemia in pregnancy. Birth weight, pre-term delivery and post-partum haemorrhage rates did not change over time. Transfer of information between the regional service and remote community health centres improved as did the safety and quality of care. The Aboriginal women users of the MGP interviewed (n=12) reported an increase in the cultural responsiveness of the service.

The authors also identified several challenges for successful program delivery. These included: the mobility of women who often visited other communities for extended periods of time; lack of transport in the community; challenges working across cultural contexts; and the lack of interpreter services were all identified as barriers in a qualitative evaluation of the model. Acute emergencies and high workloads were also noted as taking priority over antenatal care.

Also, examining this program, Josif et al (2014) investigated the experiences of women and midwives during the establishment of the new model of maternity care in the MGP using qualitative interviews with staff, stakeholders and patients (n=66).[6] This included MGP midwives (n=6), AHWs (n=2), a Senior Aboriginal woman working in the new model (n=1), hospital midwives (n=8), Department of Health staff (n=34), staff from other agencies (n=3), and remote dwelling Aboriginal women who used the service (n=12). The study generated one overarching theme, "*It's not a perfect system but it's changing*", acknowledging the efforts made to improve care provided to remote dwelling women.[6]

The MGP model was praised by all participants. Women liked the service and articulated a distinct difference in the way they were treated. The relationships between MGP midwives and employed hospital staff were also deemed by these service providers to have strengthened as a result of the model. Moreover, staff observed that service users had a far more balanced and equal relationship with the MGP midwives, which allowed them to become strong advocates for the women.[6]

Respondents reported a reduction in prolonged or unnecessary contacts with maternity services for remote dwelling women and their infants following the start of the MGP. Transfer of information about the women also improved; this extended beyond knowing the women's medical histories to their knowledge and insight into women's circumstances.[6]

Hamilton et al (2016) conducted a mixed methods study to investigate the provision of **cardiac rehabilitation (CR) and secondary prevention services** for Aboriginal and Torres Strait islander people in Western Australia (WA).[4] The study conducted interviews (n=34) with coordinators from CR services in metropolitan (n=12), rural (n=10) and remote (n=10) Indigenous populations. The interviews gathered both quantitative and qualitative data, asking participants to describe case management including the process of care; education materials, tests, interventions and medications; access to an AHW; and buddying or mentoring systems for those whose family members were not available to take part in decision making. Additional questions focused on cultural awareness training; availability of Indigenous staff; and adherence to CR guidelines.[4]

Overall, 65% of coordinators reported that there were processes in place for identifying Indigenous Australians in their service. A higher proportion of coordinators reported this in remote areas (75%). All programs reported having referral processes across regional, metropolitan, public and private hospitals, general practice and AMSs, as well as self-referrals. Referral rates varied widely and were greater in metropolitan areas. The percentage of Indigenous patients attending the CR programs ranged from 50%-75% and were lower in metropolitan areas,

Up to 30% of services included programs or activities to meet the cultural needs of Indigenous patients. Other resources included educational material for Indigenous patients (35% of services) and a buddy or mentoring system (27% of services). Seventy-one percent of programs reported being able to access an Aboriginal Health Worker with rural and remote programs (80% and 83%) having greater access than metropolitan programs (50%). Indigenous patients were referred to Indigenous specific programs provided by the AMS for CR and secondary prevention.

Remote services were more likely to identify people and provide activities to meet the cultural needs of Indigenous patients (83%) compared with rural (30%) and metropolitan services (25%). Case management for Indigenous patients was offered by 32% of services: this was higher for rural (50%) compared with remote (17%) and metropolitan (33%). Specific education materials for Indigenous patients were provided by 35% of services. The study pointed to the need for a minimum dataset, identification of Indigenous status, guideline implementation, an integrated care pathway, continuing professional development and the use of mobile health technology.

Cardiac Rehabilitation care pathway[4]

The care pathway includes: (1) Identification of Indigenous status; (2) referral processes across regional, metropolitan, public and private hospitals, GPs and AMS, and self-referrals; (3) programs and activities to meet the cultural needs of Indigenous people; (4) Indigenous specific education resources; (5) access to Aboriginal midwives and allied health professionals; (6) access to an AHW; (7) Indigenous specific programs provided at AMSs. AMS provision of transport for patients is an important component of access to services.

Mechanisms to support transfer of care include **case management,** and **coordination of care** based on effective partnerships and information flow between health services, and **referral networks**.

Anjou et al, 2013 conducted a qualitative study using semi-structured interviews, focus groups, stakeholder workshops and meetings to determine the **local co-ordination and case management strategies** required

to improve eye care for Indigenous Australians.[7] Focus groups were conducted at seven sites in Victoria (n=3 urban; n=4 rural) and semi-structured interviews were conducted at 21 sites across Australia in urban (n=6), regional (n=7) and remote (n=8) locations. A total of 29 Indigenous health organisations participated in the project. Participants were people working in Indigenous health, eye care, hospital, non-government organisations and government (n=289). This included n=98 AHS staff and n=12 NACCHO affiliate staff.[7]

Four themes were identified for improving the co-ordination of Aboriginal and Torres Strait Islander peoples' eye care: 1) Pathways of care 2) Workforce coordination 3) Case management 4) Local care co-ordination.

Eye health care pathway[7]

The care pathway included (1) awareness of problem, (2) advice or assessment by the AHW/AHS, (3) optometry exam then depending on the condition, (4) referral for glasses, or treatment, or monitoring of the condition.

The mechanisms to support this pathway included coordination, communication, collaboration and pathway facilitators such as case support and transport.

In terms of **pathways of care**, AHS staff felt that long care pathways reduced the chances of completion, so clarification and simplification of care pathways was identified as being important. Existing pathways were noted to be complex with provision of eye care involving multiple people and locations, including the patient and their families/carers, AHWs, optometrists, ophthalmologists, hospital staff, AHS clinic staff, private clinics and public hospitals.

Stakeholders suggested that local development of service directories and service protocols would help to better clarify eye care pathways.

Workforce co-ordination focused on allocating responsibilities at the local and regional level, based on the resources available and existing referral pathways. **Case management** was seen as a solution to system complexity. There was strong sector support for the integration of case management for high risk patients (e.g. those with diabetes); staff reported that case management resulted in better patient outcomes, even with complex cases. **Care co-ordination** was supported as a necessary step in care planning. Human resources to support the proper provision of eye care, included patients, families and caregivers, AHW, optometrists, ophthalmologists, hospital staff and clinic staff in AHS.[7]

Hinton et al (2015) describe the development of **a best practice pathway** to support improved mental health and wellbeing, based on the perspectives of two remote communities in the Northern Territory and 27 service providers and community members, purposively sampled.[2]

The care pathway targeted youth, adults and people with chronic disease including pregnant and perinatal women. The study used participatory methods to agree an integrated, coordinated and cooperative approach to mental health care that was flexible, smooth, and culturally informed. Family, community, health service and cultural resources were integrated fully into the screening, assessment, referral and feedback process. Cross-service collaboration, dedicated staff and a positive, open approach to service delivery with respectful communication and respect for community values.

Mental health and wellbeing care pathway[2]

The pathway consists of 12 steps: (1) Annual screening for depression, with perinatal screening during pregnancy, at 6 weeks and 6 months post-partum; (2) identification of at risk individuals; (3) documentation in the health centre file; (4) full assessment by a clinician with input from Aboriginal

workers and family and interpreters; (5) immediate referral of high risk individuals following best practice recommendations; (6) development of a care plan within 1 week; (7) delivery of the intervention(s) within 4 weeks, such as counselling, medication, physiotherapy or cultural intervention; (8) support to participate in the intervention(s); (9) referral to other services such as domestic violence or housing; (10) referral to community activities such as sport, art, music, dance and links to contact people; (11) progress and care plan reviewed; (12) feedback from external services within 4 weeks.

The mechanisms that support transfer of care include **referral** to specialists and other clinicians, for cultural treatment in consultation with family; to services such as housing, domestic violence or drug and alcohol services; referral to community activities; **care planning** and obtaining **feedback** from all external providers on service completion.

Although the pathway has not been evaluated, the process of development demonstrated support for a clear pathway to early intervention for mental health. The consultations also identified that service delivery should promote integration, flexibility and collaboration between services and the community.

Challenges included inadequate resourcing and infrastructure, stigma or shame associated with depression and a lack of knowledge about services, disrespect for elders and social issues such as dropping out of school, and a lack of role models. Enablers included local health services such as men's health programs, health promotion and drug and alcohol services; and community services such as employment, law, justice, housing, play groups and youth services.

3 Early intervention principles

Einsiedel et al (2013) focused on the question of early intervention to **prevent self-discharge.**[5] Although this study does not describe a program, the findings highlight several key elements which may reduce self-discharge among Aboriginal people. Using a prospective cohort study design, researchers conducted patient interviews weekly using a structured data collection form on topics such as understanding of diagnosis, satisfaction with services and perceptions of staff and environment. Participants were identified from general medical units at Alice Springs Hospital, where self-discharge is frequent; rates of self-discharge by Aboriginal adults in Central Australia are the highest reported worldwide. Aboriginal adults (>14 years of age) admitted to the general medical units at ASH between July 2006 and August 2007 were deemed eligible for the study. Two hundred and two medical inpatients were interviewed.

With two exceptions, patients expressed satisfaction with their medical care and only 6.4% of patients complained of poor communication. 23.3% of patients were concerned by hospitalisation and 35.1% were troubled by some aspect of hospital infrastructure (i.e., asphalt surroundings, lifts and being on the second floor). Possible transfer to a tertiary referral centre was associated with most concern (46.7%).

Univariate analysis revealed that male gender, age <45 years, a past history of self-discharge, possible transfer to a tertiary referral centre, a history of alcohol use, a desire to drink alcohol and town camp residence were associated with increased rates of self-discharge. Increasing dissatisfaction with treatment by staff, an increasing urge to leave hospital and the need for transfer outside Central Australia were associated with increased risk. Improving cultural safety by providing access to an Aboriginal Liaison Officer and family members, with improvements in cross-cultural communication skills among medical staff were thought to reduce self-discharge.

Grey literature

In total, there were 14 pieces of grey literature identified through the two searches that were included in this review. This included: An evaluation report of the NSW Health 48 Hour Follow up program;[8] two Integrated Care Strategies (Illawarra Shoalhaven and Western NSW Local Health Districts)[9, 10] with the Western NSW Strategy outlining nine separate initiatives operating within the LHD; Transition Care Program Guidelines by Victoria Health;[11] South Eastern Sydney LHD's Aged Services Plan 2015-18;[12] Yerin Aboriginal Services Annual Report;[13] and a Telethon Kids Institute report by Wyndow et al (2014), *Identifying and supporting pregnant Aboriginal women and their families during their patient journey through services and across geographical areas: a feasibility study*.[14] Each of the programs are described below.

The NSW Health 48 Hour Follow Up Evaluation: Final Report 2016 evaluates the development and implementation of the 48 Hour Follow Up Program, which aims to improve coordination and transfer of care. As part of the program, eligible Aboriginal patients with a chronic disease receive a telephone call within two working days, or 48 hours, of discharge from hospital, by a designated member of the agreed treatment team. At a minimum, follow up calls elicit the following issues: 1) knowledge of, and access to medications, 2) referrals and follow up appointments, 3) general wellbeing. LHDs must then report program outcomes to the Agency for Clinical Innovation (ACI).

Mechanisms supporting transfer of care through this program include: ensuring that the program forms a part of a coordinated and integrated approach to chronic disease management; refining the program eligibility criteria to implement uniformity across LHDs; strengthening automated systems to identify eligible patients; implementing evidence-based standardised call scripts; standardising staff training; ensuring the optimal mix of clinical and non-clinical staff, and Aboriginal and non-Aboriginal staff; considering a stepwise care approach for patients with more complex needs; communication and collaboration between LHDs; quality monitoring and feedback systems; increasing the flexibility of the 48 hour requirement; and strengthening partnerships between hospital services and primary health services.

The Illawarra Shoalhaven Integrated Care Strategy sets out the following transfer of care and quality improvement initiatives: 1) Regional Mental Health Strategy which has led to the development of a stepped care model of service delivery for those living with mental illness, 2) Redesign and co-commissioning of the Chronic Disease Management Program to streamline care coordination, 3) Developing improved integrated models of care with a focus on the Shoalhaven, 4) Enhanced access to specialist non-admitted outpatient clinics from GP-provided care.

Transfer of care mechanisms included: using Health Pathways, shared patient records, e-referrals and sharing data to identify patterns of service utilisation and disadvantage to help roll out the Regional Mental Health Strategy equitably; improving referral processes by GPs into the Chronic Disease Management Program; strengthening the collaboration between local GPs and specialists to develop improved integrated models of care with an initial focus on the Shoalhaven; increasing utilisation of Health Pathways, secure messages, ease-e-referrals, My Health Record and shared clinical education and training sessions between GPs and specialists to support enhanced access to specialist advice and review from GPs.

The Victoria Health Transition Care – Program Guidelines addresses the needs of older people after a hospital stay with a focus on special needs groups, including Aboriginal and Torres Strait Islander people. Its aim is to enable older people to return home after a hospital stay rather than enter residential care prematurely. Transition care provides older people with a package of services delivered as components of a care pathway that include (1) nursing support or personal care; (2) low intensity therapy (such as physiotherapy and occupational therapy) and support (such as social work) to maintain physical, cognitive and psychosocial functioning and to facilitate improved capacity in daily living activities; (3) medical support such as GP oversight; (4) case management, including establishing community supports and services and

identification of residential care options. Prior to accessing transition care, a person must first be assessed and approved for transition care by an Aged Care Assessment Team (ACAT). A person must then enter the program immediately after being discharged from hospital. Transition care can be delivered in a residential setting or in a community-based setting, such as the patient's own home.

Mechanisms supporting transfer of care through this program include case management, assessment of the care recipient's transition care needs by a multidisciplinary team at the outset of the transition care episode, evidence of discharge planning throughout the transition care episode, and ongoing case conferencing.

South Eastern Sydney LHD's Aged Care Services Plan – 2015-2018 describes the Connecting Care Chronic Disease Management Program. This program addresses the needs of people with chronic diseases who are at high risk of hospitalisation and who are likely to benefit from care coordination and self-management support. The care pathway focuses on enabling the primary health care sector to provide continuity of care by strengthening linkages with and referrals to community health and specialist medical services (e.g. rehabilitation programs, Aboriginal chronic disease programs, palliative care, aged care and disability services including falls prevention programs, and mental health and addictions services).

The mechanisms needed to support the patient journey through this program include care navigation, care coordination, health coaching and referrals to specialist chronic care teams and other required services.

The Western NSW Integrated Care Strategy outlines nine separate programs or projects as described below.

> The **Integrated Care Strategy in Molong** addresses the needs of people with chronic and complex conditions, with a focus on closing the Aboriginal health gap. The care pathway delivered through this GP led multidisciplinary team based strategy involves: (1) identifying patients who are frequent users of health care in Molong, including hospital, general practice and community based care; (2) registering for Integrated Care where assessment and care planning processes are to take place; (3) allocating registered patients to a Care Navigator who works closely with the patient and their carers to help link them to identified health and social services.
>
> Mechanisms supporting transfer of care include: Case conferencing at registration, designing a Shared Care Plan, using shared electronic records to facilitate the ability to share relevant information to guide care planning and delivery and implementing a social and community care coordinator.
>
> **The Wellington Project** aims to address the needs of Aboriginal people with chronic disease through culturally appropriate team based care. Two crucial positions have been implemented at Wellington Aboriginal Corporation Health Service (WACHS) to support the care pathway delivered through this project: (1) the Care Facilitator who supports the patient, family and care team to better manage a person's identified health needs by organising appointments, referrals, home visits and structured follow up, and (2) the Social and Community Care Coordinator who works closely with the patient, family and social care providers to facilitate the coordination of social care. The hosting of local service provider forums has also facilitated the care pathway through fostering professional networks and streamlining the services delivered to patients.
>
> Transfer of care mechanisms included: care navigation, social and community care organisation and local service provider forums.
>
> The **Cobar GP led multidisciplinary care model of care**. This model addresses the needs of people with chronic disease and complex health needs, with a focus on the Aboriginal population. The care pathway includes: (1) developing a Care Plan template for use by all practitioners; (2) holding regular interdisciplinary case conferencing at the Primary Health Care Centre, with representatives from Community Health, Acute Care, Ambulance and Allied Health; (3) Reshaping

the Aged Care Forum to the Community Services Forum and expanding the membership to include a wider range of community service providers; (4) Promoting the uptake of 'My Health Record' for all ages and uploading shared health summaries; (5) Modifying workflow processes within the care team to increase participation of Practice Nurses in health assessments care planning.

The mechanisms supporting transfer of care include: clinical leadership, a comprehensive Care Plan template, case conferencing, Community Services Forums and shared health summaries.

The **Blayney GP led multidisciplinary care model** addresses the needs of people with chronic diseases such as respiratory conditions, heart disease and diabetes, with a focus on Aboriginal people. Activities undertaken to streamline the pathway include: (1) developing key networks with Orange Aboriginal Medical Service (OAMS) and the LHD's Oral Health team to enhance dental services for Aboriginal clients; (2) enhanced physiotherapy and occupational therapy services to Blayney residents; (3) offering of outpatient appointments by a subacute team through the support of Bathurst Health Service; (4) adopting multidisciplinary care conferencing and utilising videoconferencing to allow outreach allied health staff to participate in case management meetings.

Transfer of care mechanisms include: local partnerships, case conferencing supported by communication technologies and outpatient services.

The **First 2000 Days of Life project 'Bellies, Bubs and Beyond'** is a community response to supporting all families as early as possible, with a distinct focus on Aboriginal families. Its emphasis on antenatal care outcomes aims to identify women early in their pregnancies to connect them with the required specialist services. The care pathway delivered through this model includes (1) access to their first comprehensive health assessment prior to 14 weeks; (2) a Care Plan reflective of their obstetric, general health and social care needs; (3) a Care Navigator to coordinate health and social needs; (4) a choice of care (e.g., shared care between midwife, GP and specialist providers); (5) ongoing communication to support the transition of care between the community and the birthing facility; (6) early identification and support to address existing and emerging psychosocial risks; (7) support to enhance healthy lifestyle choices; (8) access to coordinated and responsive postnatal care; (9) continued support for the health, development and wellbeing of the family following the birth of the baby until the child is enrolled in formal schooling.

Transfer of care mechanisms include: an early comprehensive health assessment, an integrated Care Plan, a Care Navigator, care coordination, regular communication supporting linkages between relevant service providers, a multi-agency approach and investing in designated roles linking service providers.

The **Asthma in Mudgee (AIM) Project**, addresses the needs of people with asthma, with an emphasis on Aboriginal & Torres Strait Islander patients. The project is focused on reducing Emergency Department presentations, improving community management of asthma patients and increasing patients' quality of life. Components of the care pathway include: (1) developing a comprehensive service model including the completion of comprehensive health assessments for enrolled patients; (2) establishing key partnerships, including the Asthma Foundation, Specialists and Primary Health Networks (PHN) to improve coordination of required services for patients; (3) Holding whole of community education sessions.

Transfer of care mechanisms include: care coordination, community pharmacy playing a role in identifying poorly managed conditions in the community, outside of acute care settings, partnerships with community-based health organisations and community education sessions.

The Dementia project, THINC – Timely, Holistic, Integrated, Nearby Care is a project for people with dementia and cognitive decline, with a focus on the Aboriginal population in Mudgee. This project aims to links service providers from acute, primary, community and social sectors to delivery better coordinated person and carer centred care. Activities established through the care pathway include: (1) establishment of the Memory Clinic; (2) timely diagnosis of cognitive decline and referral; (3) early future planning; (4) reduction in duplication of health assessments; (5) aligning the project with the LHD Geriatric Medicine Service; (6) strengthening relationships between general practice, LHD and community service providers.

Mechanisms to support transfer of care include timely diagnosis, referral and fostering relationships between general practice, LHD and community providers.

The Walgett project – 'Family Health and Wellbeing' focuses on addressing the health and social needs of families, with a focus on the large Aboriginal population in Walgett. The project is a multi-agency and multi-disciplinary whole of family approach which aims to coordinate the services required by families from pregnancy through the start of formal schooling. Components of the care pathway include: (1) identification of the family unit; (2) performance of a gap analysis; (3) identification of needs through a comprehensive health assessment; (4) development of a care plan between relevant health and social care providers; (5) formation of partnerships between families and care providers to adequately address specified care needs.

The mechanisms that support transport of care include: comprehensive needs assessment, partnerships between families and health and social care providers, care coordination and maintenance of referral pathways by care navigators.

The **Dubbo Diabetes Project**, which aims to improve the management of Type 2 Diabetes in Aboriginal patients. Key activities delivered through this project include: (1) developing referral pathways for diabetes patients in Dubbo; (2) ensuring the seamless transitioning of patients between acute sector and primary care service providers; (3) better supporting care providers to manage patients in community-based settings, outside of acute care settings; (4) instilling self-management skills in patients while improving their overall quality of life.

The mechanisms needed to support the patient journey through the care pathway are: referral pathways, uptake of 'My Health Record' in primary care settings with specialists, community pharmacists, private and public allied health providers, diabetes management education and the establishment of Dubbo Diabetes Health Network, with multidisciplinary representation from all service providers in Dubbo.

Yerin Aboriginal Health Services' Annual Report outlines Yerin's Integrated Team Care (ITC) initiative, which addresses the needs of Aboriginal and Torres Strait Islander people with chronic conditions. Its aim is to help provide equitable access to the full range of health services these patients require. The care pathway includes: (1) referral into ITC program from an acute care setting; (2) comprehensive client assessment; (3) provision of relevant community-based services based on client needs/preferences; (4) development of an ongoing care plan.

Mechanisms supporting transfer of care include referral, Aboriginal Care Coordinators, Aboriginal Outreach Workers and an ongoing care management plan.

The Telethon Kids Institute report by Wyndow et al (2014) summarises the following models of care which have been established as care pathways in Western Australia: Gascoyne Region (Carnarvon) pathway model of care; True Care True Culture (TCTC) program; Moort Boodjari Mia (MBM); and other supportive models of care.

- The development of the Gascoyne Region (Carnarvon) pathway model of care resulted in a poster outlining the Gascoyne Women's Health Care Options. This poster aims to display the range of care options available to Aboriginal and non-Aboriginal women in the region, whether they need contraception, are pregnant, want to proceed with pregnancy, or do not want to proceed. The poster was then distributed to all health professionals and allows women to make informed choices about their care.
- The TCTC program, which is specifically designed for Aboriginal women, provides an ongoing model of care from the antenatal period through when the child reaches school age.
- MBM is an alternative maternity service for the Aboriginal community living in the North Metropolitan area of Perth. The program is targeted mainly towards women at risk of receiving minimal antenatal care and delivers community based antenatal and postnatal services and education for community members on conception, pregnancy, sexual health and parenting in a culturally sensitive manner.
- A variety of different supportive models of care that exist within and between regions were highly regarded by health professionals. These include informal or formal shared care arrangements with GPs and the local hospital, a Midwifery led model through the local Aboriginal Health Service, a hospital based antenatal clinic, Aboriginal Health Services or Aboriginal specific antenatal services.

The common mechanisms needed to support transfer of care include: Engagement and access to culturally appropriate models of care (outreach, transport, and a holistic model of care support access and engagement); long-term health professionals offering relationships of trust and respect; a universal patient record management system; strong relationships between health professionals; service co-location; frequent interdisciplinary team meetings; service coordination.

References

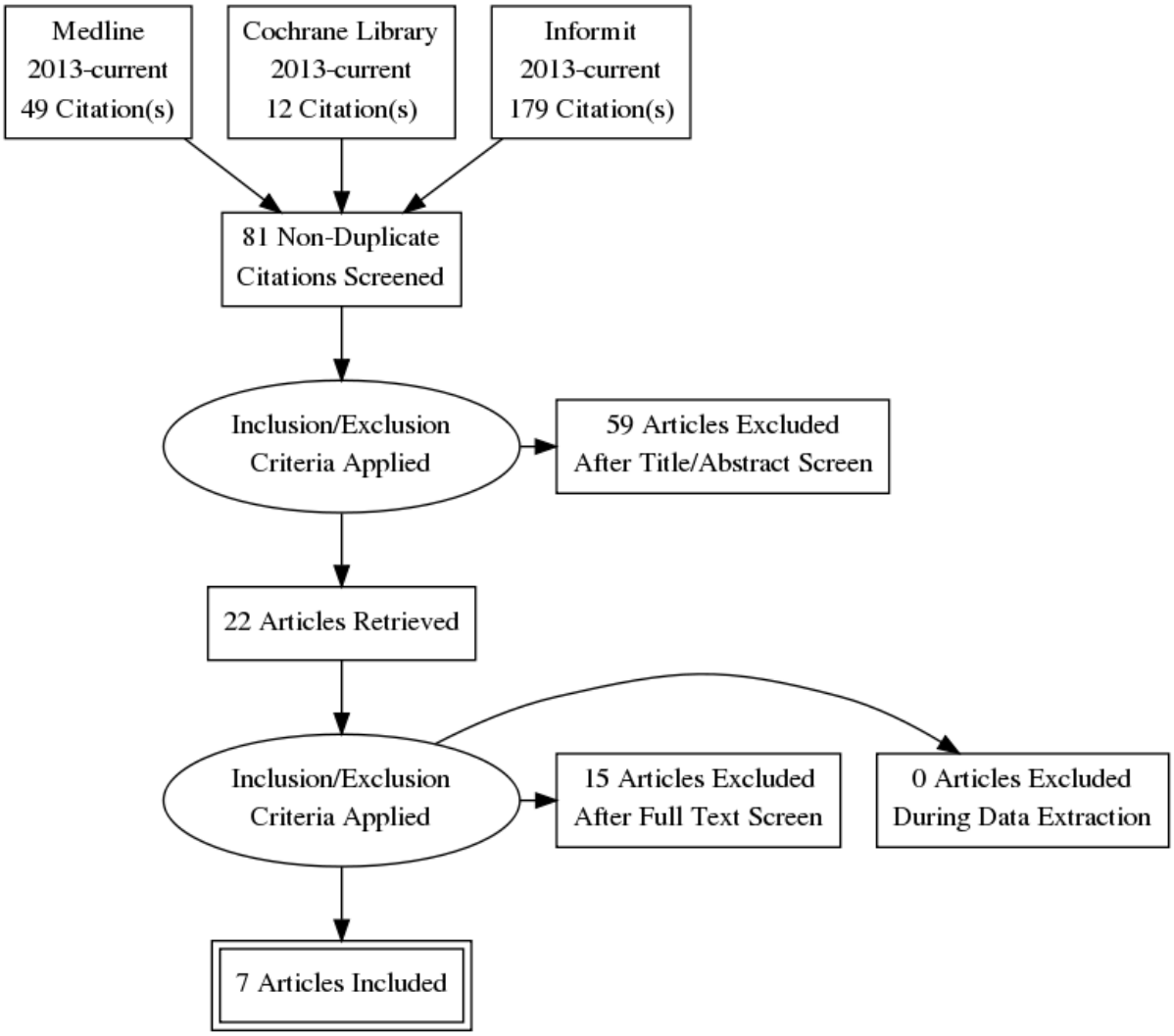
1. Diplock G, Ward J, Stewart S, Scuffham P, Stewart P, et al. The Alice Springs Hospital Readmission Prevention Project (ASHRAPP): a randomised control trial. BMC Health Services Research. 2017;17(1):153.
2. Hinton R, Kavanagh DJ, Barclay L, Chenhall R, Nagel T. Developing a best practice pathway to support improvements in Indigenous Australians' mental health and well-being: a qualitative study. BMJ Open. 2015;5(8):e007938.
3. Kildea S, Gao Y, Rolfe M, Josif CM, Bar-Zeev SJ, et al. Remote links: redesigning maternity care for Aboriginal women from remote communities in Northern Australia–a comparative cohort study. Midwifery. 2016;34:47-57.
4. Hamilton S, Mills B, McRae S, Thompson S. Cardiac Rehabilitation for Aboriginal and Torres Strait Islander people in Western Australia. BMC Cardiovascular Disorders. 2016;16:150.
5. Einsiedel LJ, van Iersel E, Macnamara R, Spelman T, Heffernan M, et al. Self-discharge by adult aboriginal patients at Alice Springs Hospital, Central Australia: Insights from a prospective cohort study. Australian Health Review. 2013;37(2):239-45.
6. Josif CM, Barclay L, Kruske S, Kildea S. 'No more strangers': Investigating the experiences of women, midwives and others during the establishment of a new model of maternity care for remote dwelling aboriginal women in northern Australia. Midwifery. 2014;30(3):317-23.
7. Anjou MD, Boudville AI, Taylor HR. Local co-ordination and case management can enhance Indigenous eye care--a qualitative study. BMC Health Services Research. 2013;13:255.
8. Wilson G, Willis J, Totterdell J, Gupta A, Chong A, et al. Aboriginal identification in hospitals quality improvement program: Evaluation findings. Melbourne: St Vincent's Hospital; 2017. Available from: http://www.health.nsw.gov.au/research/Publications/aihqip-evaluation-report.pdf
9. NSW Government. Western NSW Integrated Care Strategy Second Progress Report November 2016. Dubbo: NSW Government; 2016.
10. COORDINARE – South Eastern NSW Primary Health Network & Illawarra Shoalhaven Local Health District (ISLHD). The Illawarra Shoalhaven Integrated Care Strategy 2017-2020 2017. Available from: https://www2.health.vic.gov.au/Api/downloadmedia/%7B51F4E664-D428-469B-BE85-FD1640D11BCD%7D
11. Victoria Health. Transition Care Program. Melbourne: Victorian State Government; 2018.
12. South Eastern Sydney Local Health District. South Eastern Sydney Local Health District Aged Care Services Plan 2014-17. 2015. [Access Date: May 2018]. Available from: http://www.seslhd.health.nsw.gov.au/Planning_and_Population_Health/documents/HealthPlans/FinalAgedCarePlan_22%20April_2015.pdf
13. Yerin Aboriginal Health Services Inc. Annual Report 2016 - 2017. Wyong: Yerin Aboriginal Health Services Inc.; 2017.
14. Wyndow P, . Identifying and supporting pregnant Aboriginal women and their families during their patient journey through services and across geographical areas: a feasibility study. [Subiaco, W.A.]: [Telethon Kids Institute]; 2014 2014 Report No. Available from: http://www.kemh.health.wa.gov.au/services/amssu/docs/Identifying_and_supporting_pregnant_ Aboriginal_women_%20patient_journey.pdf

Appendix A: Databases searched in Informit Online

AGIS-ATSIS	Attorney-General's Information Service - Aboriginal and Torres Strait Islander Subset 6505 Records; 1975 - present
AHB-ATSIS	Australian Heritage Bibliography - Aboriginal and Torres Strait Islander Subset 6598 Records; Archive: 1987 - Oct 2012
AIATSIS	Indigenous Studies Bibliography 90542 Records; 1990 – present
AMI	Australasian Medical Index 142265 Records; Archive: 1968 - December 2009
APAIS-ATSIS	Australian Public Affairs Information Service - Aboriginal and Torres Strait Islander Subset 38074 Records; 1978 – present
ATSIhealth	Aboriginal and Torres Strait Islander Health Bibliography 28935 Records; 1900 – present
AusportMed	9830 Records; Archive: 1989 - September 2012
DRUG	Drug Database 139035 Records; 1974 - February 2014
FAMILY-ATSIS	Australian Family & Society Abstracts Database - Aboriginal and Torres Strait Islander Subset 9800 Records; 1980 – present
FNQ	Far North Queensland Collection 23299 Records; Archive: 1994 - January 1999
Health & Society	Health & Society Database 33798 Records; 1980 – present
Health Collection	84852 Records; Full text publications: 1977- ; Index: 1977-
HIVA	HIV/AIDS Database 35350 Records; 1980 - Feb 2014

Indigenous Australia	29267 Records; Archive: 1968 - December 2002
Indigenous Collection	19312 Records; Full text publications: 1977- ; Index: 1977-
MAIS-ATSIS	Multicultural Australia and Immigration Studies - Aboriginal and Torres Strait Islander Subset 4185 Records; 1988 –
RURAL	Rural and Remote Health Database 40978 Records; 1966 – present

Appendix B: PRISMA Diagram



Appendix C: Data extraction tables

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
Hinton et al. 2015	Qualitative study using a participatory action framework to inform the development of an agreed early intervention pathway for mental health and wellbeing assessment referral and care	Early intervention pathway	2 remote communities in the Northern Territory	27 service providers and community members purposively sampled. The care pathway targets all youth, adults and people with chronic disease including pregnant and perinatal women	Care pathway: 1. Screening for depression annually; perinatal women screened in pregnancy, at 6 weeks and 6 months post-partum 2. At-risk identified and services provided 3. Screening and services documented in file 4. Full assessment for those at risk with input from indigenous workers, family and interpreters 5. High risk referred specialist review and or advice from CARPA (Central Australian Rural Practitioners Association) 6. Care plan developed 7. Still at risk receive brief intervention (psychotherapy, cultural) within 4 weeks 8. Cultural support or treatment provided in consultation with family and indigenous practitioners 9. Referrals to other services (housing, AOD) 10. Referral to community members and activities e.g. sport, culture, art, music, dance, church 11. Progress is reviewed and care plan revised as needed 12. Feedback from external agencies received within 4 weeks of service concluding	The pathway draws on family, community, services and cultural resources to be integrated fully into the screening, assessment, referral and feedback process	Challenges: 1) lack of resources; substandard infrastructure. High turnover, poor communication and underqualified staff 2) Poor understanding of stigma; poor knowledge of services. 3) Substance use, gambling, disrespect for elders, poor school attendance, lack of role models. Enablers: 1) services at local health centres such as men's health programs, youth health, health promotion, AOD services, justice, housing, employment 2) Community resources; cultural activities e.g. art, education, sport, religious programs, roles for elders 3) service collaboration for early intervention.	Support for a clear pathway to early intervention for mental health. Service delivery should promote integration, flexibility and collaboration between services and community. Adequate resourcing (staff and facilities) required. Model not evaluated. Highlights Indigenous mental health and wellbeing as multifaceted and strongly linked to cultural identity. Social determinants and health promotion are important in the healing process

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
Kildea et al 2015	Cohort study comparing the quality of care before and after the implementation of a clinical redesign of maternity services	Care pathway Care coordination	Health Centres in large remote communities approx. 500km from Darwin. The Royal Darwin Hospital (RDH) is the key acute setting providing tertiary care including NICU	n=412 women n=416 infants (including 5 twins)	Enhanced Midwifery Group Practice (MGP) launched in 2009. Service focused on remote dwelling Aboriginal women of all risk profiles. Midwives share care with providers and only provide care when women in Darwin for appointment or admission until they return to communities. Program focuses on communication, choice, collaboration and improving continuity and coordination of care (the "5Cs"). The MGP had access to hospital, systems and databases. Care pathway consists of 1) antenatal care provided in the remote community 2) transport to and from Darwin using patient assistance transport scheme funding airfares and accommodation 3) antenatal care in Darwin before birth 4) birth at RDH 5) postnatal care in Darwin 6) postnatal care in remote community provided by designated midwives	The MGP staffed by 2 midwives, a coordinator, 2 AHW midwife students, a senior Aboriginal Woman from a remote community, admin officer, 2 midwifery relievers. The Senior Aboriginal woman provided cultural support	Barriers: mobility of women visiting other communities for extended periods of time, lack of transport in the community, challenges working across cultural contexts and lack of interpreter services. Acute emergencies and high workloads were also noted as taking priority over antenatal care	Compared to the baseline cohort fewer women in the MPG had < 4 visits in pregnancy (14% vs 8%); a higher proportion of women had routine antenatal tests recorded (85% vs 97%) and improved screening rates for urine and STIs. The treatment of conditions as per recommended guidelines worsened in some areas such as treatment of UTI with antibiotics and treatment for anaemia in pregnancy. birth weight, pre- term delivery and PPH did not change over time
Hamilton et al, 2016	Mixed methods using structured 60 min interviews on including questions about culturally appropriate approaches for Indigenous	Care pathway Care Coordination Integrated care	Public/private hospitals and cardiac rehabilitation services in urban, rural and remote settings	Care coordinators from cardiac rehabilitation services AMS program coordinators (n=38 services) providing Cardiac rehabilitation /	Data inconsistent but covered 4 topics. (1) identification of and services for Indigenous people: (2) Programs to meet cultural needs of Indigenous people. (3) Cultural awareness training. (4) Use of guidelines including NHMRC strategies for Indigenous Australians.		Barriers included (1) Cultural safety (2) Involving an AHW and family (3) Use existing services and engage local community networks (4) Ensure community involvement and control in planning, implementing and	1) 60% had processes to identify Indigenous Australians. All had referral processes including to AMS and self-referrals. 5%-75% attend CR programs. 2) Up to 30% of services included activities to meet the cultural needs.

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
	people and Quantitative data from reports at interview, subsequently emailed. Data analysed using SPSS.			secondary prevention			evaluating programs and resources (5) Partnerships including across referral network (6) Considering the specific needs of Indigenous Australians in planning and delivering services (7) Developing specialist training for and support attendance, including Aboriginal Health Workers, Liaison Officers and Allied Health Assistants.	35% of services had educational material for Indigenous patients; 27% had a buddy or mentoring system. 71% reported being able to access an AHW with rural and remote programs (80% and 83%) metropolitan programs (50%). Indigenous patients were AMS. Remote services more likely to identify Indigenous patients and to provide culturally appropriate activities.
Josif et al, 2014	A mixed method design within Participatory Action Research was used. Data obtained from semi-structured interviews, field notes and observations	Care pathway Care coordination Integrated care	Largest regional hospital, the Midwifery Group Practices (MGP) rooms, and two remote communities in the 'top end' of the Northern Territory of Australia	n=6 MGP midwives n=2 AHW/student midwives n=1 Senior Aboriginal Woman from one target community n=8 midwives at regional hospital, n=12 remote dwelling Aboriginal women n=37 agency staff	The MGP employs a woman-centred model of care for women of all risk status. It aims to improve quality of care within a sustainable and culturally responsive caseload model of maternity care. Through the MGP, women receive routine pregnancy care in their community with a remote area nurse/midwife or remote outreach midwives who visit from the regional centre as needed and a locally based General Practitioner or specialist outreach obstetric service which visits three or four times a year.	The MGP was staffed by six full time equivalent (FTE) midwives, two FTE AHWs who are also enrolled as Bachelor of Midwifery students, a Senior Aboriginal woman (SW) from one of the remote communities, a Co-ordinator and	Perspectives offered: MGP model was praised by all participants. Women like the service and articulated a distinct difference in the way they are now treated. An overarching theme emerged through service user interviews which reflects participants' views that while maternity services might still not be perfect, a lot of effort is	There was a reduction in prolonged or unnecessary contacts with maternity services for remote dwelling women and their infants when the MGP started. The transfer of information about women also improved as a result of dealing with midwives who knew the women. This extended beyond knowing the women's medical histories to their

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
						Administration Officer.	being made to improve care provided to remote dwelling women, as evidenced by the MGP model.	knowledge and insight into women's circumstances.
Einsiedel et al, 2012	Prospective cohort study. Patient interviews were conducted for 2-3 h each week using a structured data collection form on topics such as understanding of diagnosis, satisfaction with services and perceptions of staff and environment. Risk factors for self-discharge were then identified prospectively.	Discharge planning	General medical units at Alice Springs Hospital, Central Australia.	Aboriginal adults (>14 years of age) admitted to the general medical units at ASH between July 2006 and August 2007 were deemed eligible for the study. 202 of 1380 medical inpatients were interviewed.	Self-discharge frequent. Male gender, age <45 years, a past history of self-discharge, possible transfer to a tertiary referral centre, a history of alcohol use, a desire to drink alcohol and town camp residence, dissatisfaction with treatment by staff, increasing urge to leave hospital and the transfer outside Central Australia were associated with increased rates of self-discharge.	Hospital staff and Aboriginal Liaison Officers	Patient perspectives: Most patients expressed satisfaction with their medical care. Only 6.4% patients complained of poor communication. 23.3% concerned by hospitalisation 35.1% troubled by infrastructure (i.e., asphalt surroundings, lifts and being on the second floor). Possible transfer to a tertiary referral centre associated with most concern (46.7%).	300 Aboriginal adults self-discharged during 489 admissions between July 2006 and August 2007. The median time to self-discharge was 3 days.
Diplock et al, 2017	Protocol for a randomised control trial comparing a tailored, multidimensional	Discharge planning Care pathway Care coordination	Patients will be recruited from medical and surgical admissions to Alice Springs	Subjects will be identified within 48 h of admission. Surgical patients will have one or more pre-existing	The control group receives usual care (discharge planning services). Includes patient education and referral to allied health services. Participants the intervention group receive the same services with a multi-dimensional and	The control group using the existing hospital-based, nurse led service. Case management	Facilitators likely to be: Improved patient and family education and community-based support, pre-discharge planning and	N/A

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
	transitional care package to usual care		Hospital, the regional referral centre	chronic disease diagnoses e.g. foot ulcer with diabetes. While enrolment not limited to Indigenous Australians, most requiring frequent readmission are Aboriginal Australians	case-based transitional care package headed by a multidisciplinary team. At admission, participants receive: 1) A comprehensive needs based interview 2) Coordination of referrals to allied health, social work and mental health and addictions 3) Nurse/ medical officer-led education re diagnosis and management, with Aboriginal interpreters and AWPs 4) Medication review and education by a pharmacist 5) Case conferencing for management plan 6) Liaison with local primary healthcare providers 7) A written discharge plan with the medical team, participants, primary health care providers and families with a copy sent to a designated worker at the primary health care delivery site upon discharge. Following discharge: 1) Telephone case conference with patient and family between by 5 of discharge 2) Telephone case conference with primary care provider by day 5 3) Participant primary health care review within 7 days 4) Support for participants if they return to hospital to receive outpatient services	approach delivered by a team: medical officer, Aboriginal Health Practitioner, nurse and pharmacist	community and primary health care based liaison, early follow-up and continuous chronic disease treatment/management	
Anjou et al, 2013	Qualitative study using semi-structured interviews, focus groups,	Care pathway Care Coordination	n=7 focus i.e. 3 urban, 4 rural; n=21 interviews i.e. n=6 urban, n=7	29 Indigenous health organisations and 289 staff participated in the	Four themes were identified for improving the co-ordination of Aboriginal and Torres Strait Islander peoples' eye care: 1) Pathways of care 2) Co-ordination workforce 3) Case	Patients, families and caregivers, Aboriginal Health Workers (AHW), optometrists,	Enablers include the establishment of local referral pathways and service directories, and ensuring these are	This study suggests effective eye care services involves patients, families, caregivers, AHWs,

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
	stakeholder workshops and meetings to determine the strategies to improve eye care	Integrated care	regional and n=8 remote.	interviews: n=98 AHS staff, n=14 community health staff, n=31 optometrists, n=25 ophthalmologists, n=35 hospital staff, n=10 Division of General Practice staff, n=16 non-government organisation staff, n=12 NACCHO affiliate staff and n=29 government staff.	management 4) Local eye care co-ordination.	ophthalmologists, hospital staff and clinic staff in AHS.	promoted to all service providers. Enablers included employing enough people who are trained and funded to oversee services and patients, sufficient workforce and funding, and ensuring local areas identify roles required for co-ordination and organisation. There should be a case co-ordination strategy in each Aboriginal Health Service for all patients at high need, and mechanisms for care co-ordination and partnerships and agreements and services which are delivered with engagement from the community.	optometrists, ophthalmologists, hospital staff, clinic staff in AHS, private clinics and public hospitals. The completion of treatment usually warrants several visits. AHS staff reported that the longer a care pathway is, the greater the chance that a patient will not complete it. Recommendations included localised service directories and standardised referral protocols. Responsibilities should be allocated at local and regional levels, given resources and referral pathways available. Case management was viewed as a viable solution to service system complexity. Strong sector support for case management resources being directed to high risk patient groups (e.g., those with diabetes). Good co-ordination between the Australian Government's Medical

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
								Specialists Outreach Assistance Program and Visiting Optometrists Scheme may increase efficiency.
Wyndow et al, 2014	Focus groups and one-on-one interviews to determine the feasibility of an integrated pathway for Aboriginal women during pregnancy	Care pathway Care Coordination Integrated care	n= 144 people from 53 organisations i.e.. Midwives, Obstetricians, Child Health Nurses, AHW, ALO, health promotion, allied health and community workers	Participants were drawn from 53 different organisations based in Western Australia.	Pathways included: Gascoyne Region (Carnarvon) pathway, True Care True Culture (TCTC) program, and Moort Boodjari Mia (MBM). Gascoyne Region (Carnarvon) pathway produced a poster outlining the Gascoyne Women's Health Care Options. It displays the range of care options available to Aboriginal and non-Aboriginal women and was distributed to health professionals. The TCTC program for Aboriginal women operates in a hospital setting and provides a model of care from the antenatal period to the time the child reaches school age. MBM is an alternative maternity service for the Aboriginal community living in the North Metropolitan area of Perth. It targets women at risk of minimal antenatal care and delivers community based antenatal and postnatal services and education for community members on conception, pregnancy, sexual health and parenting in a culturally sensitive manner. Other models include informal or formal shared care arrangements with GPs	Various. Includes the Gascoyne Region (Carnarvon) pathway included doctors, nurses and community members. The TCTC program involves a Midwife, an Aboriginal Liaison Officer, a Child Health Nurse. In MBM, there is an Aboriginal Liaison Grand-mother, Aboriginal Health Professional, Midwife and Medical Officer, either GP or hospital Obstetrician.	Enablers and barriers included: 1) Engagement and access to culturally appropriate models of care 2) Staffing 3) Relocation. 4) Patient record management 5) Communication. 6) Coordination of services due to lack of funding and resources. Many organisations are also working in silos, offering programs that their organisational counterparts are unaware of. This has resulted in some regions over servicing in some areas and a gap in services in others. Respondents felt that all Aboriginal women should be offered, and would experience benefits from having a pathway model of care	N/A

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
					and the local hospital, a Midwifery led model through the local Aboriginal Health Service or WACHS, a hospital based antenatal clinic, Aboriginal Health Services or Aboriginal specific antenatal services and AMGP models.		that was integrated across geographical areas and services.	
Bolch et al, 2005	Plan-Do-Study-Act (PDSA) framework using case-note audit and focus groups.	Discharge planning Care pathway	Central Yorke Peninsula Hospital in South Australia	All patients aged 65 years or older admitted between October 2001 and June 2002. There were n=14 Aboriginal patients, and n=90 non-Aboriginal patients discharged in the baseline period	This 'hospital to home' program Central Yorke Peninsula Hospital includes: 1) Discharge planning for a rural and remote setting 2) Meeting the needs of older patients and their carers for safe, timely and effective discharge 3) Continuity of care across the hospital-community interface. A new discharge planning framework was established, which included a redesign of the patient admission form to incorporate a risk assessment tool, and the development of case-note 'flags' to identify existing services provided. Referral processes to community based services were streamlined and widely communicated. A key feature of the intervention was that all members of the clinical team are accountable for discharge planning. Moreover, flip charts and information transfer packs, designed for use in the hospital environment, were adopted by community health care providers. Post discharge communication was initiated, with a telephone call to all patients aged at least 65 years, and	An ALO was employed to foster respect for cultural diversity. Local GPs, community health workers, and other hospital health care workers helped roll out the program.	N/A	There was a significant increase in the proportion of patients with a documented discharge plan for both non-Aboriginal (23%) and Aboriginal patients (52%). Furthermore, there was a significant increase in the proportion of patients who received timely and informative risk screening (41% for non-Aboriginal and 58% for Aboriginal patients). Community health service referrals also increased significantly from baseline to the intervention period (14% for non-Aboriginal and 33% for Aboriginal patients). The program also gave rise to improved communication

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
					Aboriginal patients at least 45 years, within 10 days of discharge.			processes between hospital staff and community health service providers. At baseline, community health service providers (n=9) all raised issues about patient referrals, including low number, untimely referrals and poor documentation. GP baseline surveys (n=7) indicated that discharge planning was fair. n=3 GPs reported they were unaware of what services patients received when admitted to hospital, and were rarely notified of a patient's discharge. Staff focus groups reported poorer discharge planning for Aboriginal patients than non-Aboriginal patients, with one clients met with aggression without adequate cultural awareness training.
Bryce et al, 2017	Data were collected prospectively at 3 x time periods:	Discharge planning Care pathway	Princess Alexandra Hospital, Brisbane	Aboriginal and Torres Strait Islander patients with cardiac and	In 2015, a new model of care for Aboriginal and Torres Strait Islander patients admitted to Princess Alexandra Hospital for cardiac and	N/A	N/A	Follow-up with GP at 7 days were 47%, 84%, and 87% for the pre-, early post- and late post-

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
	1) Pre-intervention March 2015 - August 2015 2) Early post intervention September 2015 - February 2016 3) Late post intervention June 2016 - November 2016. Data were used to assess the ongoing effect of a new model of care on GP follow-up rates.			cardiac surgical conditions	cardiac surgical conditions was developed. This care model focuses on ensuring GP follow-up after hospitalisation, and seeks to instigate sustained improvements in rates of GP follow-up.			intervention periods respectively. Follow-up wit GP at 30 days were 79%, 90%, and 96% for the 3 periods. Such data suggests that the model of care examined in this study resulted in lasting improvements in rates of GP follow-up.
Karen Milward Consulting Services, 2015	Pilot project description: The Aboriginal Health Transitions Project	Discharge planning Care pathway Care coordination Integrated care	The 18- month pilot project is being undertaken by HealthWest (HW) Partnership, Werribee Mercy Hospital (WMH) and Western Health - Sunshine Hospital (WHSH).	The project aims to improve the cultural safety and service coordination for Aboriginal and Torres Strait Islander clients, from hospital to community.	The pilot project aims to improve the client journey by using a systems approach to embed the principles of cultural safety and service coordination in the Aboriginal and Torres Strait Islander client pathway from hospital to community. Due to the large scope of the project, project partners have streamlined evaluation efforts into two key areas: 1) Development of culturally safe hospital to community pathways focusing on discharge planning, referral and service access 2) Implementation and uptake of service coordination principles and practice to support	N/A	N/A	Information gathered during this project confirmed that there has been a significant increase in the overall number of Aboriginal people accessing the ED, Maternity Services and other areas at both Western Health - Sunshine Hospital and Werribee Mercy Hospital campuses following the project's implementation. Patients

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
					Aboriginal and Torres Strait Islander clients moving from the hospital setting to the community.			acknowledge that the services have become more culturally appropriate in the wake of this project's implementation. However, so too did they report the need to continue to build upon these improvements. Comments made by staff confirm that improvements have occurred in a number of areas with respect to the provision culturally responsive services; however, there is still much room for improvement at both hospitals to continue to build on what they have achieved to-date.
Illawarra Shoalhaven Local Health District (ISLHD), 2017	Strategy description	Discharge planning Care pathway Care coordination Integrated care	The Illawarra Shoalhaven Local Health District (ISLHD) forms the regional context for this report.	Strategies/interventions discussed will focus on how to work towards 'Closing the Gap' on health issues for members of Aboriginal communities across the region.	The following programs and quality improvement initiatives have been identified as region-wide priorities: 1) Regional Mental Health Strategy 2) Redesign and co-commissioning of the Chronic Disease Management Program 3) Developing improved models of care with an initial focus on the Shoalhaven 4) Enhanced access to specialist non-admitted outpatient clinics 5)	N/A	The Integrated care strategies outlined in this document are dependent on the following enablers: 1) Patient experience (Patient Reported Outcome Measures and Patient Reported Experience Measures	N/A

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
					Aboriginal health. With respect to the Regional Mental Health Strategy, a 'Systems Approach to Suicide Prevention' will be the first led joint initiative in mental health. The Illawarra Shoalhaven was selected as one of four pilot sites within NSW to participate in this program. The strong collaboration required between the health and social sectors to support this initiative will be facilitated through HealthPathways, shared patient records, e-referrals and sharing data to identify patterns of service utilisation and disadvantage. Secondly, the redesign of the Chronic Disease Management Program involves building on the foundations of the program, Connecting Care in the Community. This program streamlines care coordination for people with complex chronic diseases, in collaboration with GPs. Next, developing improved models of integrated care with an initial focus on Shoalhaven involves strengthening the collaboration between local GPs and specialists. This is expected to lessen the need for after-hours emergency responses. Furthermore, enhanced access to specialist non-admitted outpatient services aims to improve timely access by GPs to specialist care, as well as capacity and speed of access		will enable all services across the health system to monitor their quality, effectiveness and timeliness through regular patient feedback). 2) ehealth (extending the use of e-referrals through secure messaging between primary care and secondary care will assist in improving the timely flow of information between GPs and specialists). 3) Data exchange (to ensure the joint plans and strategies developed are targeted appropriately and effectively implemented, there is a need to nesure there is a commitment to data exchange and shared intelligence. 4) Population health priorities (these priorities provide the context for the Integrated Care Strategy and also provide the impetus for	

Author, year	Study type	Type of Initiative	Setting	Population	Description of program and elements	Resources	Barriers Enablers	Results
					to outpatient clinics. Finally, the Integrated Care Strategy will strive to prioritise the Aboriginal population to reduce the health disparities for Aboriginal residents. Collaborative approaches to improve relationships with Aboriginal Community Controlled Health Organisations (ACCHO) will lso be developed.		ensuring prevention and early intervention initiatives are aligned with the strategy). 5) Shared governance (strengthening governance and accountability involves improving policy and planning dialogue and evaluation between local people, decision makers and service providers).	

Appendix D: Grey literature websites

Australian and NSW Government websites

NSW Ministry of Health

http://www.health.nsw.gov.au/Pages/default.aspx

NSW Clinical Excellence Commission

http://www.cec.health.nsw.gov.au/

NSW Local Health Districts

Central Coast

http://www.cclhd.health.nsw.gov.au/

Far West

http://www.fwlhd.health.nsw.gov.au/

Hunter New England

http://www.hnehealth.nsw.gov.au/

Illawarra Shoalhaven

http://www.islhd.health.nsw.gov.au/

Mid North Coast

http://mnclhd.health.nsw.gov.au/

Murrumbidgee

http://www.mlhd.health.nsw.gov.au/

Nepean Blue Mountains

https://www.nbmlhd.health.nsw.gov.au/

Northern NSW

http://nnswlhd.health.nsw.gov.au/

Northern Sydney

http://www.nslhd.health.nsw.gov.au/

South Eastern Sydney

http://www.seslhd.health.nsw.gov.au/

South Western Sydney

https://www.swslhd.health.nsw.gov.au/

Southern NSW

http://www.snswlhd.health.nsw.gov.au/

Sydney

http://www.slhd.nsw.gov.au/

Western NSW

http://www.health.nsw.gov.au/lhd/Pages/wnswlhd.aspx

Western Sydney

http://www.wslhd.health.nsw.gov.au/

Aboriginal and other health research institutes

AH&MRC

http://ahmrc.org.au/

SAHMRI

https://www.sahmriresearch.org/our-research/themes/aboriginal-health/theme-overview

Aboriginal Healthinfo net

https://healthinfonet.ecu.edu.au/

George Institute

https://www.georgeinstitute.org.au/

Lowitja

https://www.lowitja.org.au/

Menzies

https://www.menzies.edu.au/page/Research/Indigenous_Health/

Poche indigenous health network

http://pochehealth.edu.au/

Aboriginal Health Organisations

NACCHO

http://www.naccho.org.au/

AMS Redfern

http://amsredfern.org.au/

Orange AMS

http://oams.net.au/

Dubbo AMS

http://www.dubboams.com.au/

Walgett AMS

http://walgettams.com.au/

Moree AMS

http://piusx.com.au/

Western Sydney AMS

http://www.amsws.org.au/

Maari Ma (Broken Hill AMS)

http://www.maarima.com.au/

Albury AMS

http://www.awahs.com.au

Awabakal Newcastle

http://www.awabakal.org

Bourke AHS

http://www.bahs.com.au

Brewarrina AHS

http://www.bahsl.com.au

Bulgarr Ngaru (North Coast)

http://www.bnmac.com.au

Bullinar AHS (Ballina)

http://www.bullinahahs.org.au

Coomealla (Far West)

http://www.chacams.org

Coonamble

http://www.cahs.net.au

Durri AMS (Kempsey)

http://durri.org.au/

Galambila AHS (Coffs Harbour)

http://galambila.org

Griffith AMS

http://www.griffithams.org.au/

Illawarra AMS
http://www.illawarraams.com.au

Katungal (Far South Coast)

http://www.katungul.com.au

Ngaimpe (Central Coast)

http://www.theglencentre.org.au

Oolong (Illawarra)

http://www.oolonghouse.org.au

South Coast AMS

http://www.southcoastams.org.au

Tharawal

http://www.tacams.com.au

Ungooroo

http://www.ungooroo.com.au

Weigilli (Illawarra)

http://www.weigelli.com.au

Wellington ACHS (Far West)

http://www.wachs.net.au/

Yerin (Hunter)

http://www.yerin.org.au/