

ABORIGINAL IDENTIFICATION IN HOSPITALS

QUALITY IMPROVEMENT PROGRAM

EVALUATION FINDINGS

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SUMMARY

Background

The Aboriginal Identification in Hospitals Quality Improvement Program aimed to improve the cultural competence of staff in NSW hospital Emergency Departments (EDs), improve the identification of Aboriginality in NSW hospital EDs, and reduce the proportion of Aboriginal patients who have an incomplete emergency attendance. Participating EDs worked in partnership with Aboriginal organisations and communities to implement a continuous quality improvement project seeking to improve the cultural accessibility of care for Aboriginal patients. An evaluation of the program was conducted to determine whether it was meeting its aims.

Evaluation methods

A mixed methods evaluation was conducted. Qualitative methods were used to explore: whether the program was implemented as planned; whether the program led to changes in hospital policies, practices and systems relating to the cultural safety of Aboriginal patients; and implementation barriers and enablers. Quantitative methods were used to investigate whether the program increased the proportion of Aboriginal patients correctly identified as Aboriginal in ED information systems and whether the program reduced the proportion of Aboriginal patients who had an incomplete emergency attendance.

Results

Most of the program components were implemented as planned. Evaluation participants identified a series of changes to hospital and ED policies, practices and systems relating to the cultural safety of Aboriginal patients, which they attributed to the program. Participants identified factors that they felt supported the implementation of the program relating to the policy context, project governance, partnerships, implementation “champions” and quality training and support. A significant improvement in reporting of Aboriginality was found in the EDs of two of eight participating hospitals. However, overall the program did not improve the identification of Aboriginality in NSW hospital EDs or reduce the proportion of Aboriginal patients who had an incomplete emergency attendance. It is possible that limitations of the outcome evaluation contributed to this null finding.

Conclusions

This evaluation provides initial qualitative evidence that the Aboriginal Identification in Hospitals Quality Improvement Program is feasible to implement in ED settings and can help create hospital environments that are culturally safe for Aboriginal patients. However, the outcome evaluation results suggest that overall the program did not improve Aboriginal identification in EDs or reduce incomplete emergency attendances among Aboriginal patients.



BACKGROUND

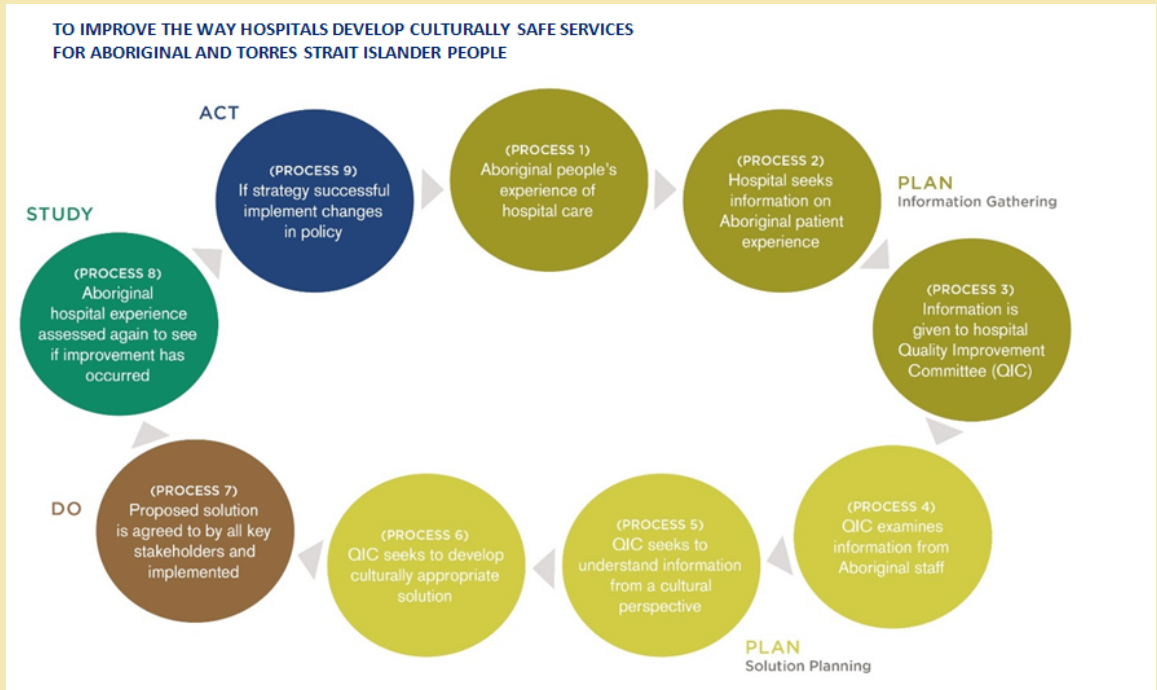
- Aboriginal people experience poorer health than non-Aboriginal people. Emergency Departments (EDs) are often an entry point into hospital services. It is important that Aboriginal people find hospitals welcoming and culturally safe. It is also important that Aboriginal people are correctly identified as Aboriginal when they attend hospital, to ensure they receive the treatment and referrals they need.
- Few studies have explored how to make hospitals more culturally safe for Aboriginal people, or whether improving cultural safety in hospitals can increase identification of Aboriginal people in health datasets or improve the health of Aboriginal people.

Aboriginal Identification in Hospitals Quality Improvement Program

- The NSW Ministry of Health commissioned St Vincent's Hospital Melbourne to implement and evaluate the Aboriginal Identification in Hospitals Quality Improvement Program (AIHQIP).
- The AIHQIP aimed to: improve the cultural competence of staff in NSW hospital EDs; improve the identification of Aboriginality in NSW hospital EDs; and reduce the proportion of Aboriginal patients who have an incomplete emergency attendance.
- Between January 2012 and July 2014, the AIHQIP was implemented with eight hospital EDs in eight Local Health Districts (LHDs) in NSW, in collaboration with local Aboriginal communities.
- As part of the AIHQIP, each participating ED implemented a continuous quality improvement (CQI) project. These projects had a focus on working with Aboriginal people to identify and implement ways of improving the cultural accessibility of hospital services for Aboriginal patients. Each hospital employed a project officer to work with multiple partners, including Aboriginal Community Controlled Health Services, in implementing a nine-step "Plan, Do, Study, Act" CQI framework (Figure 1) in their ED. Local working groups were established to lead project implementation.
- Hospitals were selected that had strong Executive support for the AIHQIP. A mix of metropolitan and regional EDs were selected to participate in the program. Several strategies were used to support participating EDs in implementing their CQI projects:
 - Project staff received a one and a half day training session on implementing the nine-step CQI framework. Project staff also received a CQI toolkit with helpful resources and examples of activities that might be conducted to support each process step.
 - To consolidate the training session and provide ongoing implementation support, each participating hospital received a series of site visits from Aboriginal and non-Aboriginal members of the central AIHQIP team. During these visits, project staff were provided with tailored CQI advice, mentoring and resources, with additional support provided via email and telephone.
 - To ensure a high level of Aboriginal ownership of projects, the central AIHQIP team supported hospitals to strengthen partnerships with local Aboriginal community-controlled organisations (ACCOS).
 - A network of ED staff involved in implementing the AIHQIP across the eight hospitals was established to: share and discuss their CQI experiences; identify key facilitators and barriers to effective implementation; and share CQI resources.
 - A newsletter documenting the progress of the AIHQIP was produced and circulated to all project participants as well as a range of ACCOs.

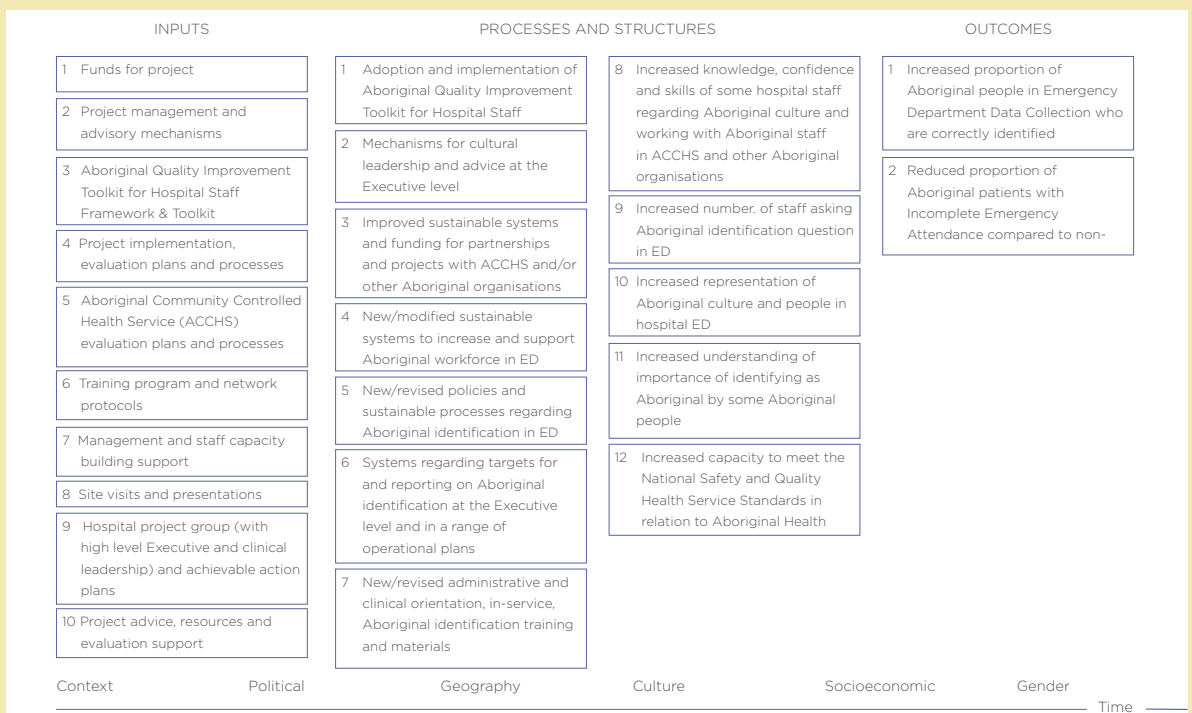
- An Advisory Group was established to guide the design, implementation and evaluation of the AIHQIP and included representatives of the following organisations: NSW Ministry of Health; Aboriginal Health and Medical Research Council of NSW; St Vincent's Hospital Melbourne; National Drug and Alcohol Research Centre, UNSW Australia; South Western Sydney LHD; Orange Aboriginal Medical Service; St Vincent's Health Australia; National Heart Foundation; and the Lowitja Institute.

Figure 1. Nine-step continuous quality improvement process used in the AIHQIP



- The AIHQIP program logic (Figure 2) lists the program inputs and components, before describing the sequence of intended organisational changes and outcomes of the program. Outcomes relate to improving the capacity of hospitals to provide culturally appropriate care to Aboriginal patients.

Figure 2. The AIHQIP program logic





EVALUATION AIMS

- The aims of the AIHQIP evaluation were to explore whether the program:
 - was implemented as planned;
 - led to changes to hospital policies, practices and systems relating to the cultural safety of Aboriginal patients;
 - increased the proportion of Aboriginal patients correctly identified as Aboriginal in ED information systems;
 - reduced the proportion of Aboriginal patients who had an incomplete emergency attendance; and
 - improved hospitals' capacity to meet national safety and quality standards relating to Aboriginal health (findings relating to this aim are not presented in this report).



EVALUATION METHODS

- Process and outcome evaluations were conducted, drawing on qualitative and quantitative methods.
- The evaluation was approved by the NSW Population and Health Services Research Ethics Committee and the Aboriginal Health and Medical Research Council Ethics Committee.

Process evaluation

The process evaluation explored whether the AIHQIP components and activities were implemented as planned and if the program led to changes in hospital policies, practices and systems relating to the cultural safety of Aboriginal patients. It also explored factors facilitating and impeding the effective implementation of the AIHQIP. The main methods used are described below.

Semi-structured interviews with key informants

- Interviews with key informants were the main source of information for the process evaluation.
- Discussions covered: progress in implementing, and feedback on, the nine-step CQI framework; facilitators and barriers to implementing local CQI projects; perceived achievements of projects; and the sustainability of outcomes.
- Interviews occurred in a quiet room in the hospital (although three were conducted on the phone), went for 15–60 minutes, and were conducted by a non-Aboriginal member of the central AIHQIP team with experience interviewing Aboriginal people. Notes were taken to aid analysis.
- Interview notes were analysed by a non-Aboriginal member of the central AIHQIP team using a data mining approach and thematic textual analysis. Responses were grouped under the questions that were asked during interviews. Following this, responses were carefully explored to identify common themes and key achievements, both within individual hospitals and across the eight AIHQIP sites.
- Twenty three informants were interviewed, including: eight project officers; eight supervisors of project staff; five hospital Aboriginal Liaison Officers; one member of the hospital executive; and one LHD, Deputy Director of Aboriginal Health Programs.

Consultation meetings with Aboriginal community-controlled organisations

- For each participating hospital, the central AIHQIP team held consultation meetings with partnering ACCOs (including Aboriginal Community Controlled Health Services) and local Aboriginal community members.

- Meetings sought the views of these partners on the achievements of local CQI projects, especially perceived impacts on the cultural safety of participating hospitals and the quality of partnerships between hospitals and ACCOs.
- Pre-program consultation meetings were held with seven partnering ACCOs, with 43 staff and local community people contributing to discussions.
- Post-program consultation meetings were held with five partnering ACCOs, with 26 staff and local community people contributing to discussions.
- Meetings went for 30–60 minutes and were mostly facilitated by an Aboriginal person. However, two meetings were facilitated by a non-Aboriginal person with experience interviewing Aboriginal people.
- De-identified notes were taken at each meeting to enable data analysis. Meeting notes were shared with senior staff in each organisation for comment or correction and subsequent endorsement.
- Meeting notes were analysed by a non-Aboriginal member of the central AIHQIP team in the same way that key informant interview notes were analysed (described above).

Review of program documentation

- For each participating hospital, documents relating to the planning, implementation or evaluation of local AIHQIP CQI projects were obtained and reviewed.
- The document review sought to describe how the AIHQIP was implemented at each site as well as the implementation enablers and barriers experienced by participating hospitals. It also sought to describe changes to ED and hospital policies, systems and procedures relating to the cultural safety of Aboriginal patients that occurred during the study period and were likely driven or supported by the AIHQIP.
- Site visit reports were also analysed. After each site visit, the central AIHQIP team and local working groups compiled a site visit report describing: the hospital context; the nature of CQI support provided; CQI resources provided to project staff; implementation progress, barriers and enablers; and relevant organisational changes in the hospital perceived to be related to the implementation of the AIHQIP.
- Documents were analysed by a non-Aboriginal member of the central AIHQIP team in a like manner to analysis of key informant interviews (described above).
- Forty three site visit reports were analysed along with forty eight other relevant program documents, including project meeting minutes, consultation reports, action plans, documentation of events; revised referrals and procedures, posters, pamphlets and project reports.

Outcome evaluation

- The extent to which Aboriginal patients identify themselves as Aboriginal to ED staff and levels of incomplete ED attendance among Aboriginal patients are considered indirect measures of the cultural appropriateness of ED service provision.
- The outcome evaluation assessed whether the AIHQIP was effective in: increasing the proportion of Aboriginal patients correctly identified as Aboriginal in ED information systems; and reducing the proportion of Aboriginal patients who had an incomplete emergency attendance.
- A multiple baseline design was used. Information on the two outcomes was obtained for each of the eight AIHQIP hospitals at several time points during two periods: (1) before the AIHQIP was implemented (baseline period); and (2) during and immediately after implementation of the AIHQIP (implementation period). Program effectiveness was

determined by comparing changes in the outcomes during the 'baseline period' with changes in the outcomes during the 'implementation period'.

- The eight AIHQIP hospitals were randomly allocated different start dates to help determine whether the AIHQIP contributed to any changes in the two outcomes of interest.
- The data source for the outcome evaluation was the NSW Admitted Patient, Emergency Department Attendance and Deaths Register, which holds linked de-identified records of all hospital separations, visits to public EDs and deaths in NSW.
- The proportion of Aboriginal patients correctly identified as Aboriginal in ED information systems was calculated by dividing the observed number of ED attendance records for which the patient was described as Aboriginal with an expected number of ED attendances by Aboriginal people – the expected count was calculated by applying an established formula to the NSW Admitted Patient, Emergency Department Attendance and Deaths Register.
- An incomplete ED attendance was defined as an attendance that ended with the patient leaving before receiving care or before the completion of care.
- ED data obtained for the outcome evaluation were analysed using generalised linear modelling.



RESULTS

Program implementation

- Information collected through the process evaluation showed that some components of the AIHQIP were implemented as intended. Key achievements included:
 - The one and a half day training session on implementing the nine-step CQI framework was delivered for all AIHQIP hospitals and was well attended and well received by most project staff.
 - During the implementation of the AIHQIP, participating hospitals received between four and six site visits, with most project staff reporting that these were useful or essential.
 - A network of ED staff involved in implementing the AIHQIP across the eight hospitals was established. Two network meetings were held, with participants reporting that these meetings enabled the sharing of CQI experiences, lessons learned and resources.
 - Three issues of a newsletter documenting the AIHQIP's progress were produced and circulated to all program participants as well as a range of Aboriginal organisations.
- Conversely, the process evaluation found two main challenges in implementing the AIHQIP:
 - Some AIHQIP hospitals experienced delays in implementing their CQI project, which reduced the length of some projects.
 - Only one hospital implemented all steps of the nine-step CQI framework, with most hospitals (n=6) completing steps one through seven and one hospital only completing to step three (Table 1).

Hospital CQI Projects

- The key characteristics of the AIHQIP hospitals and the extent to which each implemented the nine-step CQI framework are presented in Table 1.

Table 1. Key characteristics of participating hospitals and the level of CQI implementation

| Hospital | Size of hospital | Metro/rural | % of population that is Aboriginal | No. of CQI steps implemented | Length of implementation |
|-----------------|-------------------------|--------------------|---|-------------------------------------|---------------------------------|
| 1 | Medium | Rural | 11 | 7/9 | 10 months |
| 2 | Small | Rural | 5 | 7/9 | 14 months |
| 3 | Small | Rural | 6 | 7/9 | 15 months |
| 4 | Large | Metro | 2 | 9/9 | 15 months |
| 5 | Large | Metro | 1 | 3/9 | 12 months |
| 6 | Small | Rural | 3-4 | 7/9 | 12 months |
| 7 | Large | Metro | 1 | 7/9 | 15 months |
| 8 | Large | Metro | 3 | 7/9 | 10 months |

- Each participating hospital developed tailored CQI objectives. One objective ('increasing the identification of Aboriginal patients') was consistent across all sites. Table 2 outlines the project objectives across all sites and provides examples of observed organisational changes and outcomes.

Table 2. Overview of project objectives and examples of observed organisational changes and outcomes¹

| Project objectives | Number of sites targeting this objective | Examples of observed organisational changes and outcomes |
|--|--|--|
| Increase the identification of Aboriginal patients (including increasing the consistency of staff asking the Aboriginal identification question) | 8/8 | <ul style="list-style-type: none"> • New culturally appropriate pamphlet and poster designed to encourage Aboriginal patients to identify as Aboriginal were developed • Aboriginal identification training DVD and resources were made accessible to all ED and hospital staff, as well as nursing and medical students |
| Improve access to and accuracy of data on Aboriginal identification and improve communication between data systems | 4/8 | <ul style="list-style-type: none"> • Fields relating to Aboriginal identification, discharge against medical advice, did not wait and left at own risk were made available in relevant patient information systems • Aboriginal key performance indicator dashboard was developed |
| Improve continuity of care for Aboriginal patients | 3/8 | <ul style="list-style-type: none"> • New alert systems established, including a referral log in ED for administration staff and a referral link was included in patient information systems • Aboriginal Health Worker visited the ED twice daily and discharge pathways and linking to services were improved • A formal procedure for care and referral of Aboriginal patients was developed |
| Improve identification of Aboriginal patients in the ED (by Aboriginal Liaison Officers (ALOs)) | 2/8 | <ul style="list-style-type: none"> • New alert systems were established to link ALO to Aboriginal patients • ALO visited ED daily and communicated with key staff (e.g. ED Aged Care Clinical Nurse Consultant, shift nurse team leaders and ED social worker) |
| Improve physical environment in ED waiting areas, including making it a more culturally welcoming environment | 6/8 | <ul style="list-style-type: none"> • Plaque acknowledging Aboriginal land and laminated map of clans in NSW and local area established in ED • Consumer survey undertaken in relation to ED waiting environment, with information collected from Aboriginal patients collated by ALO and reported to hospital executive • Business case made to LHD for redevelopment of the triage and sub-acute areas of ED |
| Improve formal acknowledgement of the traditional owners of the land | 2/8 | <ul style="list-style-type: none"> • Acknowledgement of traditional custodians streaming on ED TV and displayed on banners and posters in hospital foyer • Plaques acknowledging traditional owners completed and installed in 2014 |
| Improve patient understanding of ED operation, staff roles and waiting times in EDs | 4/8 | <ul style="list-style-type: none"> • Leaflet explaining ED triage and administrative processes developed. Information on ED processes streamed on ED TV • Process to inform patients of waiting times embedded into shift handover procedure |
| Improve staff communication with Aboriginal patients | 1/8 | <ul style="list-style-type: none"> • Improved communication between ED staff and Aboriginal patients • Cultural competency training provided |
| Improve cultural competency of ED staff | 7/8 | <ul style="list-style-type: none"> • Aboriginal Health Workers provided orientation to ED staff on local Aboriginal history and the roles of Aboriginal Health Workers and ALOs in the hospital • Increased completion of <i>Respecting the Difference</i> training by hospital staff |
| Increase the size of the Aboriginal workforce | 2/8 | <ul style="list-style-type: none"> • Commitment was made by the LHD Chief Executive to increase the proportion of the LHD workforce who identify as Aboriginal • Reconciliation Action Plan Committee and human resources department developed an Aboriginal Employment Strategy, which includes establishing: an Aboriginal staff network; more Aboriginal identified positions; and mentoring programs |

| Project objectives | Number of sites targeting this objective | Examples of observed organisational changes and outcomes |
|---|--|--|
| Improve outreach and engagement with the Aboriginal community | 3/8 | <ul style="list-style-type: none"> Local Elders met with the LHD Chief Executive and established ongoing meetings with senior ED staff Regular information sharing sessions held between hospital social work staff and ACCOs |
| Improve ambulance, police and security staff awareness of ED procedures | 2/8 | <ul style="list-style-type: none"> LHD partnered with NSW Ambulance to improve service co-ordination Police and Ambulance staff received cultural awareness training, as recommended by Police and Ambulance ALOs |
| Improve use of Aboriginal Health Impact Statement | 2/8 | <ul style="list-style-type: none"> The NSW Health Aboriginal Health Impact Statement was used in the project and Aboriginal community endorsement was received as per LHD protocols Developing policy to ensure use of the Aboriginal Health Impact Statement in development of all LHD policies. Aboriginal Health Impact Statement and Guidelines are part of the new Disability Action Plan |
| Improve engagement, collaboration and referral processes, between hospital, Aboriginal Community Controlled Health Service and other Aboriginal health services | 2/8 | <ul style="list-style-type: none"> Formal partnership agreement established between LHD and local Aboriginal Community Controlled Health Service Referral processes between hospital, Aboriginal Community Controlled Health Service and other Aboriginal services refined Weekly collaboration occurring between the hospital and local Aboriginal Community Controlled Health Service on referral arrangements and discharge planning |
| Increase ALO presence in EDs | 2/8 | <ul style="list-style-type: none"> ALO practice guideline for follow-up established Messages about availability of ALOs (including photos) and how to contact the ALOs streamed on electronic message televisions in the ED and around the hospital |
| Reduce incomplete emergency attendances | 5/8 | <ul style="list-style-type: none"> ED critical incident response plan developed and implemented: includes identifying key Aboriginal family members and hospital staff present, maintaining communication and better management to ensure that needs are being addressed |
| Increase knowledge of Aboriginal services among social work department staff | 1/8 | <ul style="list-style-type: none"> “Local Knowledge” – In-service on local cultural awareness training for clinical staff developed in consultation with ALO and ACCHS staff and embedded in ongoing in-service training calendars |

¹ Note: Similar project objectives have been combined. These findings are drawn from key informant interviews, consultation meetings with ACCOs and review of program documentation.

Organisational changes and outcomes across all hospitals

- A key focus of the AIHQIP was on changing hospital policies, practices and systems to make EDs and other hospital services more culturally safe for Aboriginal patients.
- The AIHQIP program logic (Figure 2) describes the anticipated organisational changes and outcomes of the program. The process evaluation found that the number of outcomes achieved by participating hospitals ranged from six to all of the 11 outcomes described in the program logic (Table 3).

Table 3. Perceived organisational changes and outcomes of the AIHQIP, by participating hospital¹

| Outcomes | AIHQIP hospital | | | | | | | |
|---|-----------------|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| New or improved mechanisms for cultural leadership and advice at the Executive level | ✓ | x | ✓ | ✓ | x | ✓ | ✓ | x |
| Improved, sustainable systems and funding for partnerships and projects with ACCHS and/or Aboriginal organisations | ✓ | ✓ | ✓ | ✓ | x | x | ✓ | x |
| New/modified sustainable systems to increase and support the Aboriginal workforce in the ED | ✓ | x | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| New/revised policies and sustainable processes regarding Aboriginal identification in ED | ✓ | ✓ | ✓ | ✓ | ✓ | x | ✓ | ✓ |
| Systems in place to identify targets and report on Aboriginal identification at the Executive level and in range of operational plans | ✓ | x | ✓ | ✓ | x | ✓ | ✓ | ✓ |
| New or revised administrative and clinical orientation, staff training and materials regarding Aboriginal identification and cultural awareness | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Increased knowledge, confidence and skills of hospital staff in relation to Aboriginal culture and working with ACCHS and/or other Aboriginal organisations | ✓ | ✓ | ✓ | ✓ | x | ✓ | ✓ | ✓ |
| Increased number of staff asking the correct Aboriginal identification question in ED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Increased representation of Aboriginal culture and people in hospital ED | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Increased understanding of importance of identifying as Aboriginal by some Aboriginal people | ✓ | ✓ | ✓ | ✓ | x | ✓ | ✓ | ✓ |
| Increased capacity to meet the National Safety and Quality Health Service Standards in relation to Aboriginal health | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

¹ These findings are drawn from key informant interviews, consultation meetings with ACCOs and review of program documentation.

Factors influencing implementation

Key informants and stakeholders who participated in the AIHQIP evaluation identified several factors that they felt supported or hindered program implementation. These factors are described below.

- **Supportive policy context:** It was observed that the AIHQIP aims aligned with some statewide strategies and policies relating to Aboriginal health and the identification of Aboriginal patients in hospitals. It was felt that this alignment led to senior hospital staff actively supporting the delivery and governance of CQI projects. This support helped project officers to engage staff in project processes.

“The AIHQIP was consistent with the LHD and state policy initiatives regarding Aboriginal identification and so this really helped me get buy in from the LHD and hospital executives”.
(LHD Aboriginal staff member, Hospital 1)

- **Leadership from senior hospital staff:** It was felt that hospitals with committed ‘champions’ in hospital executives, senior ED managers, and quality staff were most

likely to implement the nine-step CQI framework thoroughly and to achieve sustainable organisational outcomes. Conversely, inadequate input from senior staff was identified as an implementation barrier. The establishment of project steering groups was identified as an effective strategy in ensuring hospital executive buy in to local CQI projects.

“The GM (General Manager) was right behind the project with a high level of engagement and he kept actively following up the implementation with senior staff and he asked for reports at executive meetings. This was essential to the success of our project”. (Social Worker Manager, Hospital 7)

- **Aboriginal advisory structures:** It was felt that having formal Aboriginal advisory structures for projects enabled Aboriginal community representatives to share their ideas and suggestions for improving the provision of care to Aboriginal patients with hospital staff, including senior managers. In hospitals in which these formal structures already existed, the project officer was able to quickly and effectively build connections and consult with local ACCOs.

“Being invited to join the Aboriginal health committee was the result of the project and it is excellent. Senior staff attend from all over the hospital and we can raise issues there and have them discussed. They take it very seriously and we have been very impressed by this. The community people have been impressed by the committee as well”. (Aboriginal Land Council Manager, Hospital 4)

- **Working groups:** It was reported that the establishment of project working groups was beneficial in engaging stakeholders in project processes. It was felt that certain staff strengthened the functioning of project working groups, including:
 - ED staff with responsibility for managing and/or reporting ED patient information. These staff enabled the use of data to inform project processes.
 - Staff from the hospital quality unit or the ED quality officer. These staff supported the adoption of project strategies in other hospital wards and sites.
 - Aboriginal health staff. These staff increased the working group's capacity to engage with Aboriginal patients and other Aboriginal health staff.
- **Building understanding and shared meaning:** Building understanding and shared meaning between project working group members and the broader ED team was considered essential to achieving practice and systems changes in EDs. The following activities were identified as helping to build shared meaning across project stakeholders: provision of cultural awareness training for ED staff; feedback to ED staff on findings and outcomes of project consultations with Aboriginal people; the establishment of links between ED workers and staff in ACCOs; and informal discussions between hospital-based Aboriginal staff and ED staff.

“...the project built relationships between the Aboriginal and non-Aboriginal staff and they then understood how important the follow up was. This type of communication about these issues was not there before the project – an unexpected positive outcome”. (Director Allied Health, Hospital 8)

- **Relationships between Aboriginal health staff and the ED team:** It was felt that most hospitals had success in increasing ED staff's understanding of the roles of ALOs and other Aboriginal health staff and in engaging these staff in project processes. It was felt that this resulted in increased referrals to hospital ALOs and improved the cultural safety of EDs for some Aboriginal patients, although these were not directly measured.

“Some ED staff certainly have a new understanding of the importance of culture and the role of Aboriginal staff in providing a good service to Aboriginal patients and they are more confident to speak with Aboriginal patients and staff...they have a higher rate of referral to and use of those Aboriginal staff than before the project”. (Nurse Manager, Hospital 3)

- **Tailored cultural awareness training:** It was considered that implementing tailored cultural awareness training in some hospitals increased some ED staff's understanding of Aboriginal culture and the needs of Aboriginal patients, and led to some staff reflecting on and altering their practice accordingly. It was also reported that such training assisted ED staff to improve collaboration with Aboriginal health staff.
- **Engaging Aboriginal organisations and communities:** Early positive engagement of ACCOs and local Aboriginal community members in project processes was identified as a key enabling factor: *"The Aboriginal people on the working group were committed, passionate and engaged. They were so keen to make the future better for their children. They gave lots of positive input on project priorities, strategies and gave us great links into the communities"*. (Project Officer, Hospital 1). For some participating hospitals, however, the development of partnerships with ACCOs proved challenging, which some staff of Aboriginal organisations attributed to: complex local contexts and histories of collaboration; a mistrust of public hospitals; concerns about the capacity of non-Aboriginal staff to guide project implementation in a culturally competent way; and a lack of organisational capacity to take on new programs.
- **ALOs:** It was felt that the participation of hospital ALOs in project processes was essential. These staff assisted project working groups by providing insights into the experiences of Aboriginal patients and by facilitating links with local Aboriginal communities. Experienced ALOs who were knowledgeable about Aboriginal patients, local Aboriginal communities and ED and hospital processes were considered particularly helpful.
"The key thing was the ALO. Without her I couldn't have done it. She really knew her local community and she linked me in and I was able to build trust because of her". (Project Officer, Hospital 6)
- **Project officers:** The employment of dedicated project officers was considered crucial to successful implementation of local CQI projects, given the busy nature of ED settings. It was reported that certain characteristics in project officers facilitated project success, especially strong project management skills, a good understanding of hospital systems, and an ability to effectively communicate and build relationships with local Aboriginal communities. It was also felt that Aboriginal project officers were particularly successful in engaging with local Aboriginal communities.
"Dedicated funds that enabled us to employ an excellent project officer were necessary. She was culturally sensitive and aware, had good management skills and understood the ED pressures". (Social Worker Manager, Hospital 7)
- **The nine-step CQI framework and associated training and support:** It was reported that the nine-step CQI framework used in the AIHQIP provided project working groups with a structured and clear set of steps for implementing local projects in a culturally competent way. Formal training in implementing the nine-step CQI framework was also considered essential to the success of projects. Site visits from the central AIHQIP team also supported the implementation of local projects, especially in sites in which key implementation staff were inexperienced in CQI processes and/or working with Aboriginal people.
"The training and support were essential. She (AIHQIP staff) was fantastic, so supportive, knowledgeable and clear about the process and she was always available when I needed her. The information and Toolkit were great too". (Primary, Community Allied Health Manager, Hospital 1)

Reporting of Aboriginality in EDs and incomplete ED attendances

This section describes the results of the outcome evaluation. In determining the effectiveness of the AIHQIP, the main consideration is whether the trend in each outcome changed significantly (and in a positive way) following program implementation. In other words, if the AIHQIP was effective the trend in the proportion of Aboriginal patients correctly identified as Aboriginal in ED information

systems would have increased significantly during and after the implementation of the program, relative to the trend before the program was implemented. Similarly, the trend in the proportion of Aboriginal patients who had an incomplete emergency attendance would have decreased significantly during and after the implementation of the program, relative to the trend before the program was implemented.

Before-program characteristics of participating EDs

- Before implementation, the proportion of ED visits for which the patient identified as Aboriginal varied widely among participating hospitals, from 1.7% to 22.3% (Table 4).

Table 4. Characteristics of the patients presenting to the ED of each hospital during the pre-program period (1st January 2010 to the month of the first site visit to the hospital)

| Pre-program characteristics (1 st January 2010 to first site visit) | Study hospitals | | | | | | | |
|---|-----------------|--------|--------|--------|--------|--------|--------|--------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Date of first site visit (month/year) | 7/13 | 5/13 | 2/13 | 10/12 | 5/13 | 5/13 | 10/12 | 9/13 |
| Months in pre-program period | 42 | 40 | 37 | 33 | 40 | 40 | 33 | 17 |
| Average number of presentations per month | 1,991 | 1,885 | 1,747 | 5,299 | 5,525 | 2,211 | 3,496 | 4,942 |
| Presentations by Aboriginal people | | | | | | | | |
| Average number per month | 132 | 167 | 389 | 104 | 176 | 91 | 60 | 227 |
| % of all ED presentations | 6.6 | 8.9 | 22.3 | 2.0 | 3.2 | 4.1 | 1.7 | 4.6 |
| Level of reporting of Aboriginality (%) | 77.6 | 79.1 | 87.2 | 61.4 | 72.6 | 77.4 | 45.5 | 79.6 |
| Incomplete emergency attendance for Aboriginal people (%) | 7.6 | 9.6 | 6.5 | 16.9 | 14.8 | 20.6 | 24.9 | 9.6 |
| Sex | | | | | | | | |
| Male (%) | 45.2 | 50.3 | 48.7 | 44.2 | 46.4 | 52.5 | 65.8 | 46.9 |
| Female (%) | 54.8 | 49.7 | 51.3 | 55.8 | 53.6 | 47.5 | 34.2 | 53.1 |
| Age (years) | | | | | | | | |
| 0-14 | 31.5 | 34.6 | 35.7 | 21.9 | 13.9 | 29.3 | 0.2 | 25.0 |
| 15-29 | 33.3 | 31.3 | 27.1 | 33.4 | 26.4 | 30.1 | 22.8 | 33.9 |
| 30-44 | 18.1 | 17.2 | 19.4 | 20.0 | 25.5 | 21.0 | 42.7 | 19.9 |
| 45-59 | 12.0 | 10.8 | 13.2 | 14.6 | 22.4 | 13.7 | 27.9 | 13.8 |
| 60-74 | 4.7 | 4.6 | 4.1 | 7.6 | 9.5 | 4.6 | 5.3 | 6.1 |
| 75+ | 0.4 | 1.5 | 0.5 | 2.6 | 2.3 | 1.4 | 1.3 | 1.2 |
| Average | 25.4 | 25.3 | 25.2 | 30.5 | 36.2 | 27.4 | 40.4 | 28.3 |
| (SD) | (18.3) | (19.2) | (19.1) | (20.6) | (19.7) | (19.0) | (13.0) | (19.3) |

Level of reporting of Aboriginality

- Prior to the implementation of the AIHQIP, levels of reporting of Aboriginality in EDs were significantly increasing over time at six of the eight hospitals, while the level of reporting was decreasing significantly at one hospital (Figure 3).
- The AIHQIP was associated with a statistically significant increase in reporting of Aboriginality in ED patient information systems in two hospitals (hospitals four and five) (Figure 3).
- In hospital four, before the AIHQIP was implemented the odds of reporting were increasing by a factor of 1.12 per year. After the program was implemented, this had increased to a factor 1.47 per year ($p < 0.001$). In other words, if the AIHQIP was not implemented the level of reporting would have increased from 61.4% in the pre-program period to 64% 12 months after the program was first implemented. However, implementation of the AIHQIP was associated with a larger increase in reporting during this period - from 61.4% to 70%.

- In hospital five, before the AIHQIP was implemented the odds of reporting were decreasing by a factor of 0.93 per year. After the program was implemented the odds of reporting were increasing by a factor of 1.07 per year ($p=0.020$). In other words, if the AIHQIP was not implemented the level of reporting would have decreased from 72.6% in the pre-program period to 71.1% 12 months after the program was first implemented. However, implementation of the AIHQIP was associated with an increase in reporting during this period from 72.6% to 73.9%.
- When data for each participating hospital were combined, statistical analysis showed that the AIHQIP did not increase overall reporting of Aboriginality in ED patient information systems (Table 5).

Figure 3. Monthly level of reporting of Aboriginality in the ED in eight AIHQIP hospitals

The shaded region indicates the program implementation period for each hospital (first site visit to last site visit). Solid lines indicate the observed level of reporting of Aboriginality pre- and post-program implementation. Dashed lines indicate the predicted level of reporting if the program did not occur, based on pre-program trends.

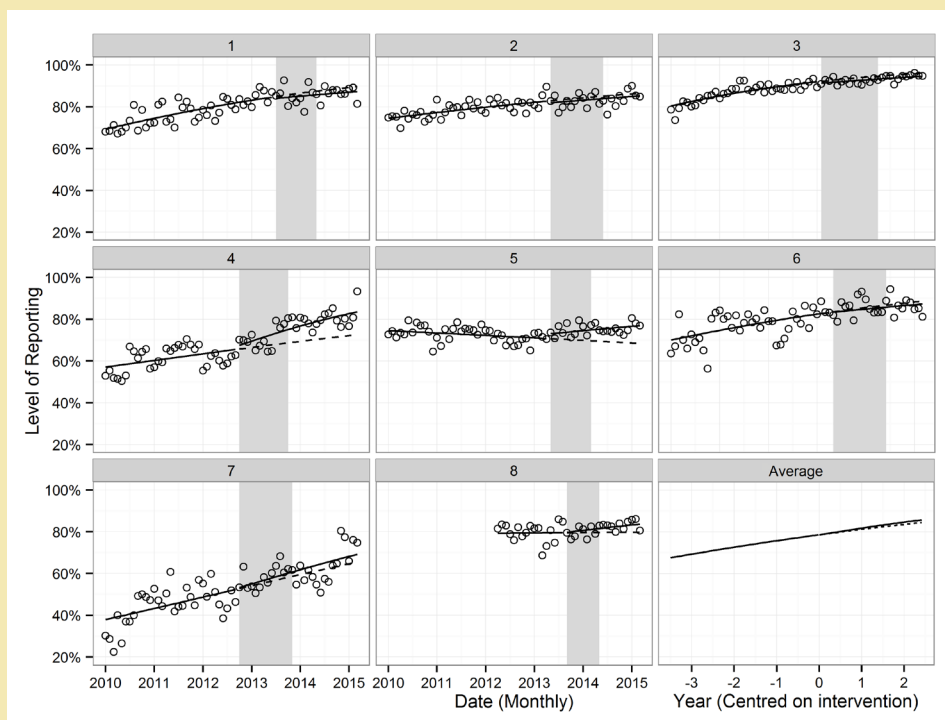


Table 5. Combined model estimates for level of reporting of Aboriginality

| Parameter | Estimate (log-odds) | Odds ratio | 95% CI | P-value |
|----------------------------|---------------------|------------|--------------|---------|
| Pre-program trend | 0.162 | 1.18 | [1.07, 1.29] | <0.001 |
| Change in trend | 0.044 | 1.05 | [0.94, 1.17] | 0.429 |
| Program/post-program trend | 0.206 | 1.23 | [1.14, 1.33] | <0.001 |
| Change in intercept | -0.004 | 1.00 | [0.91, 1.09] | 0.925 |

Incomplete ED attendances

- Prior to the implementation of the AIHQIP, levels of incomplete emergency attendance among Aboriginal patients were stable in seven of the eight participating hospitals and were significantly decreasing at one hospital (Figure 4).
- The program was not associated with a significant change in the pattern of incomplete emergency attendances among Aboriginal patients in any of the eight participating hospitals (Figure 4), nor was a program effect detected when data for all eight participating hospitals were combined (Table 6).

Figure 4. Monthly incomplete ED attendances for Aboriginal people in eight AIHQIP hospitals

The shaded region indicates the program implementation period for each hospital (first site visit to last site visit). Solid lines indicate the observed level of reporting of Aboriginality pre- and post-program implementation. Dashed lines indicate the predicted level of reporting if the program did not occur, based on pre-program trends.

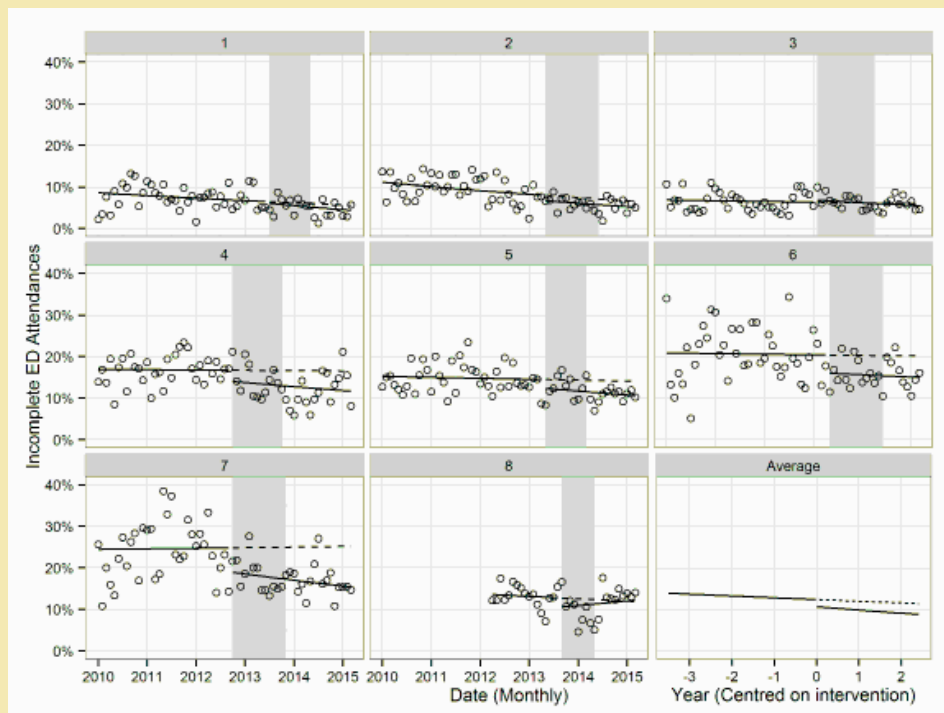


Table 6. Combined model estimates for incomplete ED attendances

| Parameter | Estimate (cloglog) | 95% CI | P-value |
|----------------------------|--------------------|------------------|---------|
| Pre-program trend | -0.036 | [-0.091, 0.019] | 0.111 |
| Change in trend | -0.047 | [-0.175, 0.082] | 0.378 |
| Program/post-program trend | -0.083 | [-0.199, 0.033] | 0.083 |
| Change in intercept | -0.161 | [-0.307, -0.014] | 0.008 |



DISCUSSION

Implementation

- Most of the AIHQIP components were implemented as planned, although most participating hospitals only implemented the first seven steps of the nine-step CQI framework and the implementation period was reduced in some hospitals.
- Evaluation participants identified several factors that supported the implementation of the AIHQIP relating to the policy context, project governance, partnerships, implementation “champions” and CQI training and support.

Achievements and outcomes

- Stakeholders who were interviewed for this evaluation identified a series of changes to hospital and ED policies, practices and systems relating to the cultural safety of Aboriginal patients, which they attributed to implementation of the AIHQIP. Relevant organisational changes and outcomes were observed in seven of the eight participating hospitals. Based on these qualitative findings, it appears the AIHQIP likely achieved its objective of improving the cultural competence of participating hospital EDs.

- A significant improvement in reporting of Aboriginality was found in the EDs of two participating hospitals. However, one of these hospitals only implemented three steps of the nine-step CQI framework, suggesting that factors in addition to – or other than – the AIHQIP contributed to improvements at this hospital during the study period.
- The findings of the outcome evaluation suggest that the AIHQIP did not achieve its objectives in relation to improving the identification of Aboriginality in NSW hospital EDs and reducing the proportion of Aboriginal patients who have an incomplete emergency attendance.

Limitations

- Limitations of the multiple baseline design that may have contributed to the failure to detect an overall program effect include:
 - Reduced implementation periods in some hospitals.
 - Changes in the outcomes of interest may have been assessed too soon, as organisational change of the type sought in the AIHQIP can take considerable time to bed down.
 - Prior to the implementation of the program, reporting of Aboriginality in ED information systems was already high in some EDs. Therefore, improvements in these hospitals may not have been detected. Similarly, pre-program levels of incomplete emergency attendance were already low in three EDs and decreases in these EDs may not have been detected.
 - The outcome indicators used do not reflect the full range of potentially positive impacts and outcomes that a complex program like the AIHQIP could achieve.
- A limitation of the process evaluation was that the researcher who conducted the semi-structured interviews with key informants was also involved in conducting site visits to some hospitals. This may have influenced some key informants' willingness to provide open feedback during interviews.



CONCLUSIONS

This evaluation provides initial qualitative evidence that the AIHQIP can improve hospital and ED policies, practices and systems relating to the cultural safety of Aboriginal patients. Over time, the organisational changes observed by participants in this evaluation will likely improve the cultural competence of ED staff and lead to the creation of more welcoming and culturally safe ED environments for Aboriginal patients. The outcome evaluation found that overall the AIHQIP did not significantly increase the proportion of Aboriginal patients correctly identified as Aboriginal in ED information systems or decrease the proportion of Aboriginal patients who had an incomplete emergency attendance. However, it is possible that limitations of the multiple baseline design contributed to this null finding. The findings of this evaluation should inform future efforts to improve the cultural appropriateness of hospital and ED care for Aboriginal patients.

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