

3.2 STRATEGIC DIRECTION 2: IMPLEMENTING WHAT WORKS AND BUILDING THE EVIDENCE

It is critical that health initiatives are informed by evidence of what works for Aboriginal people. Strategic Direction 2 focuses on supporting quality research and evaluation, disseminating evidence and supporting the translation of evidence into practice. Key actions are:

- reviewing NSW Health research programs and identifying opportunities to increase their focus on Aboriginal health
- undertaking rigorous evaluations of Aboriginal-specific programs
- supporting quality evaluations of mainstream programs to ensure their impact on Aboriginal people is considered and measured
- implementing quality improvement strategies in data collection and reporting related to Aboriginal people across NSW Health settings
- disseminating and applying the findings of research and evaluation
- building the capacity of NSW Health staff to undertake Aboriginal health research and evaluation.

3.2.1 NSW HEALTH ACTIVITIES

NSW Population Health Research Strategy

The *NSW Population Health Research Strategy 2018–2022* provides a framework for NSW Health to effectively generate and use population health research. It builds on the 2011–2015 Strategy, *Promoting the generation and effective use of population health research in NSW*, and has four objectives: supporting research that is relevant to population health policy and practice; improving the quality of population health research; increasing the use of research evidence in population health policies and practice; and building population health research capability.

The Strategy recognises the potential of population health research to improve Aboriginal health. It promotes the production of high quality and ethical Aboriginal health research in NSW, in collaboration with Aboriginal organisations and communities. Relevant actions include: driving intervention research focusing

KEY FINDINGS

NSW Health has:

- **established strategic frameworks, policies and entities that support evidence building and knowledge translation in Aboriginal health**
- **funded research, established partnerships with academics, built research capability and developed data assets to build the evidence base about what works**
- **many Aboriginal health initiatives that are being, or have recently been, evaluated, with findings informing practice—however, relatively fewer evaluations have explored the impacts of mainstream initiatives on the health outcomes of Aboriginal people**
- **increased the levels of accurate reporting of Aboriginality in perinatal, admitted patient and emergency department datasets, from 59–77% in 2010 to 84–91% in 2016/2017.**

The AH&MRC described evaluations with strong collaboration between NSW Health and the AH&MRC. However, it was felt that NSW Health could do more to share findings with, and acknowledge the contributions of, Aboriginal organisations.

on Aboriginal health; evaluation of key initiatives; promoting the use of the NSW Aboriginal Health Impact Statement to ensure the needs of Aboriginal people are embedded in population health research; and building the research and evaluation capability of Aboriginal people, and the capability of population health staff to conduct research in Aboriginal health.

The Strategy was developed by the Centre for Epidemiology and Evidence (CEE) with input from the Centre for Aboriginal Health in the MoH, eminent researchers, and LHDs. Chief Executives of LHDs were encouraged to seek the views of LHD Directors and Managers of Aboriginal Health when providing input into the Strategy. Implementation of the Strategy is monitored using a range of indicators.



NSW Government Program Evaluation Guidelines

The *NSW Government Program Evaluation Guidelines* (and related Circular) set out the NSW Government's expectations for evaluation of Government agency programs, including that: agencies evaluate their programs in line with best practice principles and standards; NSW Government clusters prepare annual evaluation schedules to help monitor implementation of the guidelines; and evaluation findings are published wherever possible.

An Evaluation Expert Reference Group has been established to help implement the NSW Government's program evaluation initiative in the Health Cluster. The Group includes staff of various NSW Health organisations and performs the following functions: prioritising initiatives for evaluation, based on the Evaluation Guidelines and NSW Health priorities; establishing a program to build evaluation capability in NSW Health; and sharing information about evaluation approaches and major projects. The NSW Government's program evaluation initiative and the Evaluation Expert Reference Group provide a structure for evaluating Aboriginal health programs and the impacts of mainstream programs on Aboriginal people.

Research and evaluation infrastructure in NSW Health

Several NSW Health entities support the generation of health research and evaluation and the translation of evidence into practice in NSW, including in the area of Aboriginal health. Examples include:

CEE, MoH, which assists health research in NSW by linking and facilitating access to health and health-related data, funding population health research, and building research and evaluation capability across NSW Health. The Centre also supports evaluation of large-scale NSW Health initiatives, including Aboriginal health initiatives.

NSW Office for Health and Medical Research, MoH, which promotes translation and innovation from research and builds research capacity by: supporting the development of medical devices and related technologies; supporting good research governance and ethics; and funding a diverse grants and training portfolio which supports Aboriginal health research and the development of Aboriginal researchers.

Clinical Monitoring, Economics and Evaluation, Agency for Clinical Innovation (ACI), which supports ACI initiatives by providing data, statistical, costing and financial analyses, economic appraisals and evaluations, including for Aboriginal health projects.

Strategic Research Investment, Cancer Institute NSW, which conducts and funds clinical trials, supports translational research, manages several cancer registries and data collections, and administers research, cancer screening and prevention grants schemes, some of which identify Aboriginal people as a priority population.

Educational Research and Evidence Based Practice, Health Education and Training Institute (HETI), which co-ordinates and conducts educational research and evaluation at HETI, provides research and evaluation advice, provides the best evidence to inform HETI's educational practice, and makes key contributions to innovation at HETI.

Research and Evaluation Service, Justice Health and Forensic Mental Health Network, which supports the Network to conduct and facilitate research and evaluation on prisoner health services and issues by providing specialist support and advice to staff and building research capacity. Many projects focus on Aboriginal health or include sub-analyses by Aboriginality.

Kids Research, Sydney Children's Hospitals Network, which conducts clinical research into diagnostic techniques and treatment methods, laboratory research into disease processes, and population health and health services research. Improving the health of Aboriginal children is a priority across multiple research portfolios.

Centre for Health Equity Training Research and Evaluation, South Western Sydney LHD, which provides leadership and expertise in training, research and evaluation for health equity. It has three work streams, one of which is Aboriginal health. The Centre coordinates a longitudinal cohort study on the health of Aboriginal babies.

Centre for Research Excellence in Integrated Quality Improvement, Northern NSW LHD, which aims to improve Aboriginal health by accelerating and strengthening large-scale primary healthcare quality improvement efforts. A key research focus is building clinical quality improvement capacity in Aboriginal staff.

Aboriginal Health & Medical Research Council of NSW Ethics Committee

The AH&MRC Ethics Committee assesses research proposals investigating the health of Aboriginal people and communities in NSW. The Committee is dedicated to supporting high quality projects that increase scientific knowledge, are of benefit to Aboriginal people and sensitive to Aboriginal cultures, ensure Aboriginal community control and input, and build the research capability of Aboriginal communities and health staff.



The Committee plays a role in educating researchers about the unique ethical considerations when conducting Aboriginal health research, and ensuring these considerations are addressed.

The AH&MRC Ethics Committee operates under National Health & Medical Research Council (NH&MRC) legislation. The Committee is assessed annually by the NH&MRC to ensure it meets NH&MRC Guidelines. The MoH partially funds the AH&MRC to manage and run the Committee, and its function and performance is monitored by NSW Health.

Summary of initiatives implemented across NSW Health

The document review and survey of NSW Health organisations identified a large number of strategic and evidence-informed initiatives aiming to support research, evaluation and evidence translation in Aboriginal health (see the Appendix for a complete list of initiatives). Table 2 describes a selection of current or recent initiatives.

NSW Health organisations are implementing grants schemes that support policy-relevant Aboriginal health research, evaluation and innovation. Examples include the NSW Translational Research Grants Scheme, the Prevention Research Support Program, and the Alcohol and Other Drugs Early Intervention Innovation Fund. Some schemes, like the Mid North Coast LHD's Research Support Grant Program, have been effective in funding projects with a focus on Aboriginal health, while others have had less success in this regard.

Priority research centres have been established that support co-produced and policy-relevant Aboriginal health research and evaluation, including the Physical Activity Nutrition and Obesity Research Group and the BBV & STI Research, Intervention and Strategic Evaluation Program. NSW Health organisations are also participating in various research partnerships and consortiums, such as The Australian Prevention Partnership Centre, which are conducting applied Aboriginal health research and building research capability in health staff.

Several initiatives aim to build research capability in NSW, like the NSW Health PhD Scholarships Program, the Early-Mid Career Fellowships Program and the Rural Research Capacity Building Program. Such initiatives provide opportunities for researchers to develop expertise in Aboriginal health research. NSW Health is supporting the translation of research findings into practice through: researcher/clinician collaborations; the delivery or support of research conferences and

symposia, such as the 2017 Innovations in Aboriginal Chronic Conditions Forum; and discrete services provided by the Sax Institute, including brokered evidence reviews in Aboriginal health.

NSW Health is investing in assets that support Aboriginal health research and evaluation. These include: the Centre for Health Record Linkage; Secure Analytics for Population Health Research and Intelligence; large cohort studies like the 45 and Up study; and public health registers which hold a vast array of linked administrative data.

Strategies are being implemented to improve the recording of Aboriginality in patient information systems, reporting of Aboriginality in health datasets and monitoring of Aboriginal health programs. Examples include: the Aboriginal and Torres Strait Islander Origin: Recording of Information of Patients and Clients policy implementation; Asking the question: improving identification of Aboriginal people training; Enhanced Reporting of Aboriginality; and the creation of the Aboriginal Maternal and Infant Health Service Data Collection. Such efforts strengthen routine data as a resource for research and evaluation.

Governance of Aboriginal health research and evaluation projects typically occurs through the establishment of advisory groups, with membership including AH&MRC and/or ACCHS staff. However, new approaches that more directly engage Aboriginal communities are being explored, like the Aboriginal Maternal and Infant Health Service Evaluation Cultural Reference Group.

The MoH has recently commissioned or implemented many Aboriginal health intervention and evaluation studies, a selection of which is described in the Appendix. Focus areas include: child and family health; chronic diseases prevention and management; acute care; continuity of care; workforce development; and BBV/STI testing and management. Mainstream initiatives have also been assessed to measure their impacts on Aboriginal people, such as Munch and Move, the *NSW Tobacco Strategy 2012-2017* and the NSW Statewide Eyesight Preschooler Screening Program. Findings of projects are disseminated and used to refine initiatives.



TABLE 2. EXAMPLES OF KEY INITIATIVES ALIGNING WITH STRATEGIC DIRECTION 2: IMPLEMENTING WHAT WORKS AND BUILDING THE EVIDENCE*

Initiative name		Initiative description	Lead agency(ies)	Scale and outcomes
Research and innovation funding				
1	Translational Research Grants Scheme	Designed to accelerate the development of research capabilities and evidence translation within NSW Health. Provides grants to staff in LHDs, Ambulance and SHNs for research projects that will translate into better patient outcomes, health service delivery, and population health and wellbeing. Aboriginal health was a priority in 2016 and 2017.	MoH/LHDs	State-wide implementation. To date, one project directly related to Aboriginal health has been funded relating to care transition. However, other projects have included sub-analyses that explore outcomes in Aboriginal people, like the Counselling and Nicotine (CAN) QUIT in Pregnancy trial.
2	Prevention Research Support Program	A competitive scheme which provides funding to NSW research organisations conducting prevention and early intervention research that aligns with NSW Health priorities, including Aboriginal health. Funding supports research infrastructure, capability building strategies, and strategies to support translation of research evidence into policy and practice.	MoH	State-wide implementation. Five of seven funded organisations identified Aboriginal health as a research focus for 2017–2021. Examples of activities include supporting ongoing studies (like the Gudaga study on child wellbeing) and building Aboriginal researcher capability to do HIV prevention research.
3	Pillar research grants schemes	Some pillars offer research grants schemes, which provide a mechanism for conducting Aboriginal health research. Examples include the Agency for Clinical Innovation's Research Grants Scheme and the Cancer Institute's translational program grants.	Various pillars	State-wide implementation.
4	Research Support Grant Program	Aims to increase research capabilities and capacity in Mid North Coast LHD and improve health service delivery and patient outcomes. Specific funding is available for research relating to Aboriginal health.	Mid North Coast LHD	LHD-wide implementation. In 2017, about half of funded projects had an Aboriginal health focus. Examples of research topics included workforce development, factors affecting early care discharge and improving service use.
5	Alcohol and other drugs and mental health innovation funds	The Alcohol and Other Drugs Early Intervention Innovation Fund aims to build the evidence base for early intervention models to support people at risk of alcohol and/or other drugs misuse, particularly young people. The Mental Health Innovation Fund provides seed funding for initiatives designed to support people with a mental illness who require services from multiple agencies and providers. Aboriginal people are identified as a priority population in both funds.	MoH	State-wide implementation. In round 1 of the Alcohol and Other Drugs Early Intervention Innovation Fund, three of nine funded projects had an Aboriginal health research focus. In two rounds of the Mental Health Innovation Fund, one project specifically related to Aboriginal people was funded.
6	Aboriginal Injury Prevention Scheme	Aims to develop an evidence base to assist in reducing rates of Aboriginal injury in NSW. Five projects have been funded, including projects related to reducing alcohol-related injury and violence, falls prevention, transport safety and creating safe homes.	MoH	Implemented in multiple LHDs. Some examples of outputs include the Safe Home Safe Kids evaluation paper (available here) and the Buckle up Safely: Safe Travel for Aboriginal Children study extended abstract (available here).

* In identifying activities for inclusion in this table, large-scale initiatives were prioritised over programs of smaller scale, as the former have greater potential to influence population health. A few small-scale innovations *with good potential for scaling up* are also included. Initiatives in this table are informed by evidence.



Research partnerships				
7	BBV & STI Research, Intervention and Strategic Evaluation	A UNSW and MoH consortium established to undertake policy-relevant research to support reductions in BBVs and STIs in NSW and improvements in the health of people living with these infections. Work program is informed by BBV and STI strategic frameworks in NSW (like the <i>NSW HIV Strategy 2016-2020</i>), all of which identify Aboriginal people as a priority group.	MoH/UNSW Sydney	Supports implementation and appraisal of the <i>NSW Aboriginal Blood Borne Viruses and Sexually Transmissible Infections Framework</i> . Key projects include: modelling of hepatitis C prevalence in Aboriginal people; a review of strategies to improve STIs and BBVs management in ACCHSs; and evaluation of a program to increase STI testing in Aboriginal people who inject drugs.
8	The Physical Activity, Nutrition and Obesity Research Group	Based at the University of Sydney and undertakes research, monitoring and evaluation of population health-based policies and programs aimed at promoting physical activity, good nutrition and healthy weight. Supports implementation and evaluation of the <i>NSW Healthy Eating and Activity Living Strategy 2013-2018</i> , which identifies Aboriginal people as a priority population.	MoH/ University of Sydney	State-wide implementation. Conducts research across major NSW strategies and programs, including programs that have tailored components for Aboriginal people, such as the Get Healthy Information and Coaching Service and the Make Healthy Normal initiative.
9	Multi-agency collaborations	NSW Health organisations participate in several large research collaborations that conduct or support research into Aboriginal health, like: Sydney Health Partners; Sydney Partnership for Health, Education, Research and Enterprise; and The Australian Prevention Partnership Centre. These collaborations involve multiple universities, independent research organisations and Government agencies, and enhance research financing, capability and translation in NSW.	Various NSW Health organisations and universities	State-wide implementation. Some of these collaborations, such as the Sydney Partnership for Health, Education, Research and Enterprise, have established Aboriginal health research streams. Further, The Australian Prevention Partnership Centre is implementing studies on food security in Aboriginal communities and creating a national approach to Aboriginal tobacco control.
10	Local partnerships	Several LHDs are collaborating with universities on local Aboriginal health research projects, like the South Western Sydney LHD/Western Sydney University study into the development of effective career pathways for Aboriginal people within the health system.	Various LHDs and universities	Implemented in multiple LHDs. Partnerships between universities and LHDs build health staff capability in conducting Aboriginal health research and evaluation and support the translation of research findings into practice.

Evidence translation and capability building

11	Rural research capacity building program	Supports rural-based NSW Health staff to participate in research training and to undertake a research project. Support is provided through tele and web conferences, workshops, and mentoring from research specialists. Applications focusing on Aboriginal health are encouraged and applicants are assisted to ensure a culturally appropriate approach is used.	HETI	Implemented in rural LHDs. Since 2013, 32 applicants have successfully completed the program and 12 are currently enrolled. Builds the research and evaluation capability of rural health staff, and supports evidence generation in rural health and translation of research into policy and practice.
12	NSW Health PhD Scholarships Program	Provides funding to host universities to support PhD candidates to gain skills and undertake projects that will build capacity in the NSW Health system in areas of identified need. Two scholarships designated for candidates of Aboriginal and/or Torres Strait Islander origin.	MoH	State-wide implementation. For 2017-20, 26 PhD students were funded, with at least two studies including a focus on Aboriginal health: testing of an antenatal smoking cessation intervention in high-risk substance dependent pregnancy; and an evaluation of a strategy to improve management of cancer nerve pain.
13	Early-Mid Career Fellowships Program	Aims to support and retain early-mid career health and medical researchers in NSW Health and facilitate skills development. Priority skills for development include health service and systems design, implementation science, evaluation and improvement, health economics and biostatistics. Aboriginal people are strongly encouraged to apply.	MoH	State-wide implementation. In 2017, 17 applicants were awarded fellowships. Two fellowships directly related to Aboriginal health were funded, focusing on models of care for burns treatment in children and physical activity promotion.



14	NSW Health conferences and symposia	NSW Health delivers or supports various conferences and symposia. Examples with an Aboriginal focus include: the yearly Patient Experience Symposium; Innovations in Aboriginal Chronic Conditions Forum 2017; the biannual National Aboriginal and Torres Strait Islander Environmental Health Conference; and the annual Chronic Diseases Network Conference.	Various NSW Health organisations	State-wide implementation. Conferences offer a way of disseminating information to a wide audience, building and promoting research capacity and supporting translation of evidence into practice. Conference presentations and materials are often made available publicly following conference proceedings.
15	Sax Institute: core funding and discrete services	NSW Health funds the Sax Institute to support the generation of research for use in policies, programs and services, and to increase policy makers' access to research findings. Funds support large assets like the Secure Unified Research Environment. Discrete services are provided to NSW Health each year, including brokered evidence reviews, evaluation and research services, exchange meetings with researchers, and research skills training.	MoH/Sax Institute	State-wide implementation. Discrete services provided to NSW Health include brokered reviews on: STI and BBV health promotion and Aboriginal community engagement; and the effectiveness of alcohol and other drug interventions in at-risk Aboriginal youth. Additionally, evaluation scoping was conducted for the Respecting the Difference Aboriginal Cultural Training.
Data assets and development activities				
16	Large observational studies	NSW Health organisations are supporting several large scale health cohort studies focusing on or including Aboriginal populations. Examples include: the Gudaga Longitudinal Study; the Study of Environment on Aboriginal Resilience and Child Health (SEARCH); 45 and Up; Seeding Success; and components of the ACCESS 3 study.	Various NSW Health organisations and universities	State-wide implementation. These studies create data assets for researchers, policy makers and consumers to interrogate to inform policy and practice. For example, SEARCH has produced 34 peer-reviewed papers since 2007 and supports researcher/ACCHS relationships and service redesign. See here .
17	Centre for Health Record Linkage	Aims to create and sustain a record linkage infrastructure for the health and human services sectors, and provide access to these resources to researchers, health planners and policy makers. Provides data linkage services for a number of research and government projects that relate specifically to Aboriginal health.	MoH	Since 2012, data linkage projects supported by the Centre have led to 24 peer-reviewed papers on Aboriginal health. Data linkage can improve the enumeration of Aboriginal status and modelling techniques help researchers to disentangle the impacts of factors like geography and Aboriginality on health.
18	Policy on recording of patients' Aboriginal status	The <i>Aboriginal and Torres Strait Islander Origin - Recording of Information of Patients and Clients</i> policy directive outlines the requirements for collecting and recording accurate information on the Aboriginal and Torres Strait Islander status of all clients of NSW Health services.	Various NSW Health organisations	State-wide implementation. The quality of recording of the Aboriginal status of maternity, hospital and emergency department patients is monitored and managed through Service Agreements between the MoH and LHDs/SHNs.
19	Strategies to improve point of care recording of Aboriginality	NSW Health organisations are implementing strategies to improve recording of Aboriginality at the point of care, including by trying to make services more culturally safe and supporting staff to ask patients about their Aboriginal status. The Health Education and Training Institute provides Asking the question: improving identification of Aboriginal people training for NSW Health staff.	Various NSW Health organisations	State-wide implementation. More information on initiatives and their outcomes is provided in Section 3.5 of this report.
20	Program monitoring systems	The NSW Ministry of Health has established monitoring systems for large Aboriginal health initiatives, like the Aboriginal Maternal and Infant Health Service and the Quit for New Life program, by adding fields to established patient information systems.	MoH	State-wide implementation. Monitoring systems that collect and report on patient-level data enable sophisticated assessment of the impacts of Aboriginal health policies and programs.



21	Public health registers	The <i>NSW Public Health Act 2010</i> allows the establishment of public health registers to support disease surveillance and monitoring of health program outcomes in NSW, among other functions. The Admitted Patient Emergency Department and Deaths Register (APEDDR) and the Maternal and Child Health Register have been established; these leverage the power of data linkage to improve the completeness and accuracy of health records for Aboriginal people.	MoH	State-wide implementation. Public health registers are a useful tool supporting Aboriginal health research and evaluation and program monitoring in NSW. For example, the APEDDR is regularly interrogated to inform monitoring and continuous improvement of the Better Cardiac Care program, a large initiative aiming to improve management of cardiac conditions in Aboriginal people.
22	Enhanced Reporting of Aboriginality (ERA)	A statistical method that uses health record linkage and an algorithm to estimate the quality of reporting of Aboriginal people in health datasets. The ERA variable is available in several public health registers and is used to support Aboriginal health research and evaluation, improve surveillance and reporting of infectious diseases in Aboriginal people, and monitor the performance of NSW Health organisations in recording Aboriginal status at the point of care.	MoH	State-wide implementation. The ERA variable is available in the APEDDR and the Maternal and Child Health Register. Work is underway to validate the ERA against self-reported Aboriginal status collected through the patient experience surveys in NSW. ERA has been used in various studies like the Aboriginal Identification in Hospitals Quality Improvement Program evaluation (Appendix).
Research and evaluation governance				
23	Aboriginal Reference Group	Aims to ensure that research conducted by, or in partnership with, the Justice Health and Forensic Mental Health Network is culturally appropriate, does no harm to Aboriginal people and is disseminated in a way that is accessible to Aboriginal communities. Has diverse membership and reviews study applications prior to AH&MRC Ethics Committee submission.	JH&FMHN	State-wide implementation. Provides a pathway for engagement with Aboriginal community experts, stakeholders and researchers conducting research in custodial and forensic settings. Provides a critical function given the over-representation of Aboriginal people in custody in NSW.
24	AH&MRC engagement in evaluation advisory groups	The NSW Ministry of Health tries to engage Aboriginal people and communities for all Aboriginal health research and evaluation projects. For large-scale studies, the AH&MRC is typically invited to participate in an advisory group. For smaller projects, the AH&MRC is often asked to nominate a relevant ACCHS(s) to participate in an advisory capacity.	MoH	State-wide implementation. Engagement of Aboriginal communities and organisations in governance arrangements supports the conduct of studies and program evaluations that are ethical, accountable and address the needs of Aboriginal people and communities.
25	AMIHS evaluation cultural reference group	Aims to ensure there is an authentic Aboriginal voice in the design, implementation and reporting of the evaluation of the Aboriginal Maternal and Infant Health Service (AMIHS). Encourages Aboriginal community members to engage with the evaluation and creates opportunities for members to discuss cultural issues arising during the evaluation. Membership is entirely Aboriginal and the group is independently chaired.	MoH	State-wide implementation. Has raised the profile of the AMIHS evaluation in Aboriginal communities in NSW and provides a mechanism for local considerations to inform evaluation activities.
26	Aboriginal advisory group for data linkage studies	In recognition of the importance of Aboriginal community governance of Aboriginal health information and research, the Cancer Institute NSW has partnered with the AH&MRC to establish an advisory committee to strengthen Aboriginal community control and guidance for the development, implementation and reporting of data linkage and epidemiology projects.	Cancer Institute NSW and AH&MRC	State-wide implementation.



BBV & STI RESEARCH, INTERVENTION AND STRATEGIC EVALUATION (BRISE)

BRISE is a collaboration between the MoH, the Kirby Institute and the Centre for Social Research in Health at UNSW Sydney. It delivers high quality research, strategic advice, capacity building and communications to support the blood borne viruses (BBV) and sexually transmitted infections (STI) response in NSW. This includes: advice on key indicators to monitor progress of NSW Health HIV, viral hepatitis and STI strategies; significant evaluations of priority policies and programs linked to the strategies; applied research and quality improvement projects in partnership with LHDs and NGOs; and primary and secondary research projects.

Aboriginal people experience disproportionately high rates of BBVs and STIs and are a priority population for intervention in NSW. As a result, BRISE has established an Aboriginal health research stream, which includes:

- the Australian Collaboration for Coordinated Enhanced Sentinel Surveillance of STIs and BBVs (ACCESS*), which monitors clinical services use, risk behaviours, testing rates, and positivity rates in priority populations
- modelling the prevalence and disease burden of hepatitis C in Aboriginal people
- surveillance of hospitalisations and mortality among Aboriginal people diagnosed with hepatitis B and C
- evaluation of the Deadly Liver Mob program, which incorporates a peer-driven intervention with incentives to educate people about BBVs and undertake hepatitis C and sexual health screening
- secondary analysis of data from the NSW Needle and Syringe Program Enhanced Data Collection (2013–2016) to explore injecting drug use in Aboriginal people
- the BRISE Aboriginal Services Program (BRISE-ASP), which aims to build an evidence base for increasing STI and BBV testing and management in Aboriginal people, and investigate opportunities for linkage with LHDs and other partners to improve effectiveness.

BRISE strengthens Aboriginal-specific research and supports and contributes to key national and state strategic directions in HIV, STIs, hepatitis B and C, and the *NSW Aboriginal Blood Borne Viruses and Sexually Transmissible Infections Framework 2016–2021*.

The secondary analysis of data from the NSW Needle and Syringe Program Enhanced Data Collection was the first Aboriginal-specific analysis of injecting drug use and receptive syringe sharing in NSW, and presents valuable insights to inform the development of programs and policies aimed at improving the health of Aboriginal people who inject drugs.

The BRISE-ASP project identified the importance of incorporating STI and BBV testing into routine assessments in ACCHSs, community outreach services, and existing health programs to increase testing rates and acceptability among Aboriginal people.

*BRISE only funds the STI surveillance component of this study.

3.2.2 PROGRESS INDICATORS

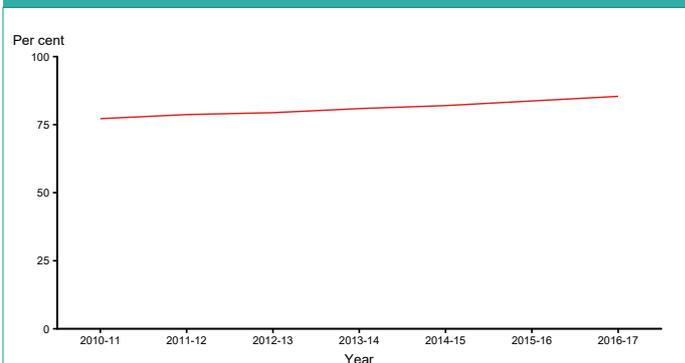
Accurate reporting of Aboriginal people is essential to measuring health services use and health outcomes among Aboriginal and non-Aboriginal people as well as the effectiveness of policies and programs.

Level of reporting of Aboriginality in the NSW Admitted Patient Data Collection

Data that relate to an individual’s stay in hospital are collected in the NSW Admitted Patient Data Collection. This includes patient services provided by NSW public hospitals, public psychiatric hospitals, multi-purpose services, private hospitals, and private day procedure centres.

In NSW during the period 2010–11 to 2016–17, the estimated level of reporting of Aboriginal people in the NSW Admitted Patient Data Collection increased from 77% to 85% (Figure 2).

FIGURE 2. Estimated level of reporting of Aboriginal people in Admitted Patient Data, NSW 2010–11 to 2016–17

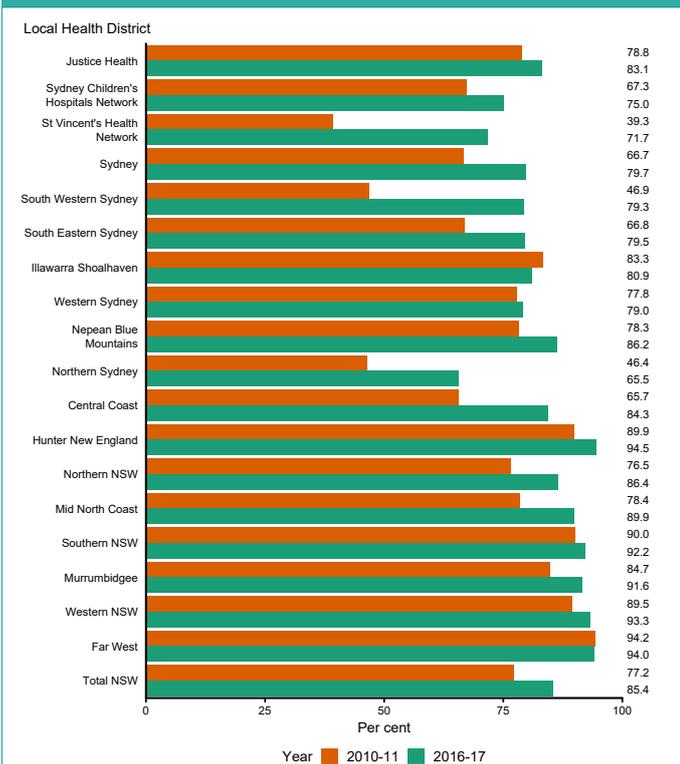


Source: NSW Admitted Patient Data Collection and Admitted Patient, Emergency Department Attendance and Deaths Register (SAPHaRI), Centre for Epidemiology and Evidence, NSW Ministry of Health.



Between 2010-11 and 2016-17, the change in the estimated level of reporting of Aboriginal people in the Admitted Patient Data Collection varied among LHDs/SHNs (Figure 3). The estimated level of reporting increased by 32 percentage points in St Vincent's Health Network and South Western Sydney LHD, while the level of reporting remained stable in Western Sydney and Far West NSW LHDs and decreased slightly in Illawarra Shoalhaven LHD.

FIGURE 3. Estimated level of reporting of Aboriginal people in Admitted Patient Data by local health district/specialty health network, NSW 2010-11 and 2016-17



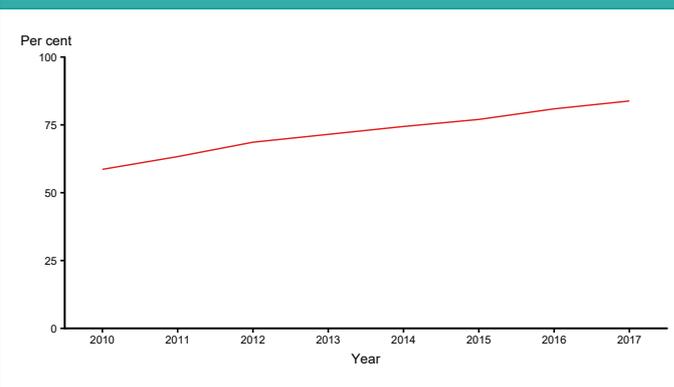
Source: NSW Admitted Patient Data and Admitted Patient, Emergency Department Attendance and Deaths Register (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.
Note: Proportions are based on observed counts of >500.

Level of reporting of Aboriginality in the NSW Emergency Department Data Collection

Data that relate to an individual's visit to a public emergency department are collected in the Emergency Department Data Collection.

In NSW during the period 2010-2017, the estimated level of reporting of Aboriginal people in the Emergency Department Data Collection increased from 59% to 84% (Figure 4).

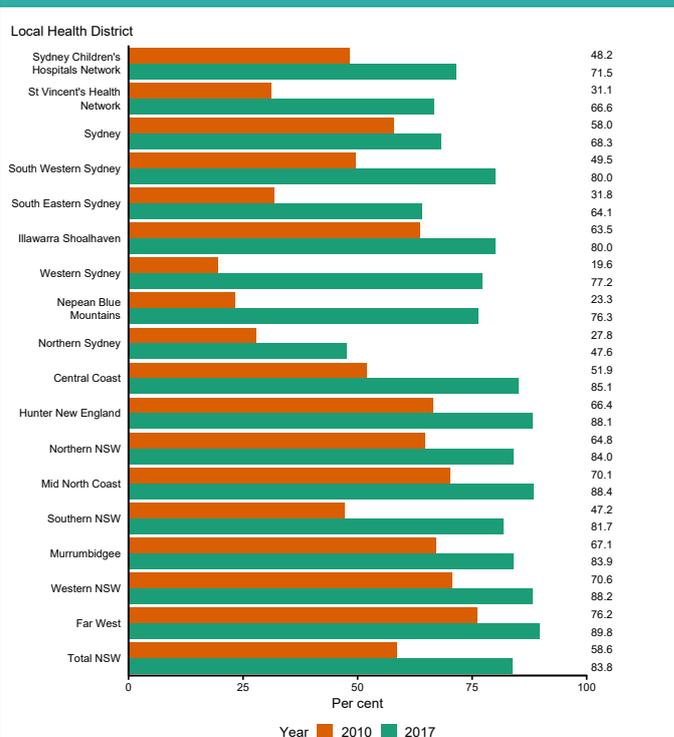
FIGURE 4. Estimated level of reporting of Aboriginal people in the Emergency Department Data Collection, NSW 2010 to 2017



Source: NSW Emergency Department Data Collection and Admitted Patient, Emergency Department Attendance and Deaths Register (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.

Between 2010 and 2017, the change in the estimated level of reporting of Aboriginal people in the Emergency Department Data Collection varied among LHDs/SHNs (Figure 5). Almost all (15 of 17) LHDs/SHNs achieved an increase in the level of reporting of more than 15 percentage points. The greatest increases occurred in Western Sydney and Nepean Blue Mountains LHDs (absolute increases of 58% and 53%, respectively).

FIGURE 5. Estimated level of reporting of Aboriginal people in the Emergency Department Data Collection by local health district/specialty health network, NSW 2010 and 2017



Source: NSW Emergency Department Data Collection and Admitted Patient, Emergency Department Attendance and Deaths Register (SAPHaRI). Centre for Epidemiology and Evidence, NSW Ministry of Health.
Note: Proportions are based on observed counts of >500.

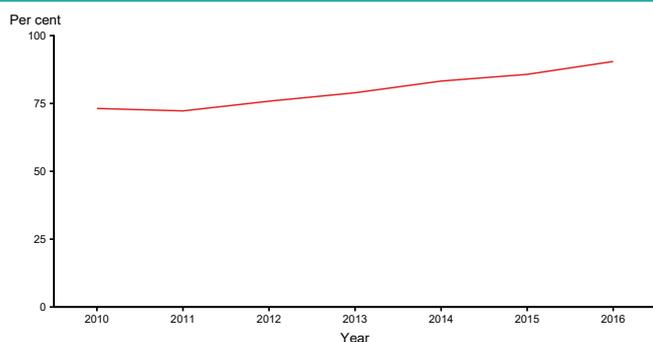


Level of reporting of Aboriginality in the NSW Perinatal Data Collection

The NSW Perinatal Data Collection is a record of all births in NSW public and private hospitals, as well as homebirths.

In NSW during the period 2010–2016, the estimated level of reporting of Aboriginal people in the Perinatal Data Collection increased from 73% to 91% (Figure 6).

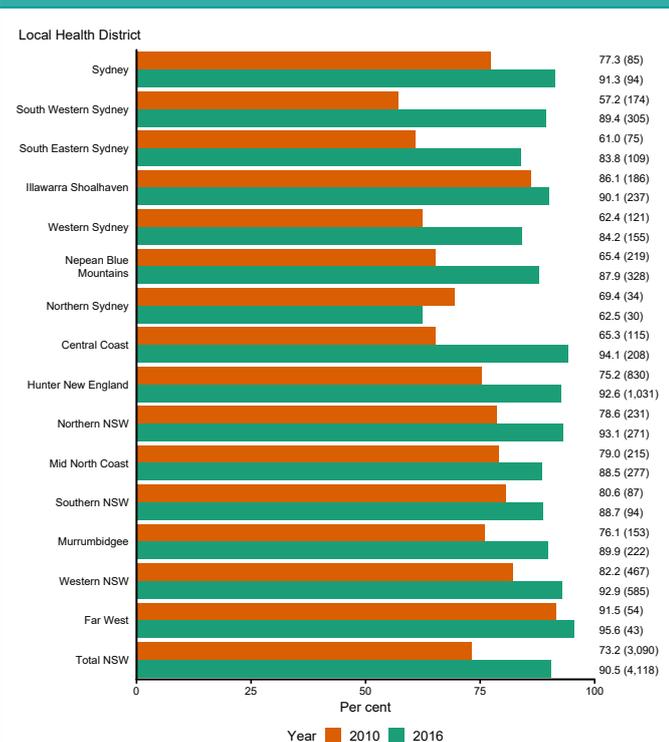
FIGURE 6. Estimated level of reporting of Aboriginal people (mothers) in the Perinatal Data Collection, NSW 2010 to 2016



Source: Maternal and Child Health Register (SAPHaRI), Centre for Epidemiology and Evidence, NSW Ministry of Health.

Between 2010 and 2016, almost all (14 of 15) LHDs achieved an increase in the estimated level of reporting of Aboriginal people in the Perinatal Data Collection, although the magnitude of the change varied (Figure 7).

FIGURE 7. Estimated level of reporting of Aboriginal people in the Perinatal Data Collection (mothers) by local health district, NSW 2010 and 2016



Source: Maternal and Child Health Register (SAPHaRI), Centre for Epidemiology and Evidence, NSW Ministry of Health. Note: "Private Hospitals" or other not stated LHD values are not shown in the LHD/SHN bars, but are included in the NSW total. The number in brackets () is the observed count.

CASE STUDY

CENTRE FOR HEALTH RECORD LINKAGE (CHeReL)

The CHeReL maintains a record linkage infrastructure for the health and human services sectors, and provides services to bona fide researchers and health planners and policy makers. Record linkage can provide a comprehensive picture of the health of the population and can be used to study the effectiveness of health interventions, as well as the relationships among socio-economic and lifestyle factors and health.

Currently, the CHeReL links data from the health, education, transport, justice and human services sectors. In November 2017, there were 154 million records from 24 datasets included in the CHeReL Master Linkage Key. More than 170 additional datasets have been linked on request. Since its establishment in 2006, the CHeReL has supported the projects of 1,810 researchers, evaluators and policy makers, leading to more than 440 publications.

Since 2012, data linkage projects supported by the CHeReL have resulted in 24 peer-reviewed publications on Aboriginal health. Linked data have also been used in developing and monitoring key NSW Government strategies, like the *NSW Aboriginal Road Safety Action Plan 2014–2017*.

An example of the CHeReL in use: Enhanced Reporting of Aboriginality (ERA)

Aboriginal people are under-reported in health data collections in NSW. ERA is a method that improves reporting on the health of Aboriginal people from administrative data collections using record linkage. Enhanced reporting relies on having linked records for the same person collected from independent sources such as hospital admissions, emergency department presentations, births and deaths. Each record in the chain of linked records contributes to the weight of evidence as to whether a person is Aboriginal, but may have been recorded as being non-Aboriginal or 'unknown' on some records.

Based on this weight of evidence, an ERA variable can be created for each individual and used for research studies involving any or all contributing data sources. In this way, more representative data are available on health outcomes for the NSW Aboriginal population without imposing an extra collection burden on Aboriginal communities.

The ERA variable is available in several NSW public health registers and is used to support Aboriginal health research and evaluation, improve surveillance and reporting of infectious diseases in Aboriginal people, and monitor the performance of the NSW Health system in recording Aboriginal status at the point of care.



3.2.3 STAKEHOLDER FEEDBACK

Views of NSW Health staff

Staff in several LHDs and SHNs felt that evidence generation and knowledge translation in Aboriginal health could be improved. Suggested focus areas include:

- partnering with the AH&MRC to support high quality evaluations of Aboriginal programs
- investing in evaluations of local programs
- building the research and evaluation capability of Aboriginal staff.

Additionally, the Centre for Aboriginal Health in the MoH emphasised the importance of working collaboratively with the Aboriginal community-controlled health sector when conducting Aboriginal health research or evaluation and when seeking to build local research capacity. It was also felt that existing data capture, monitoring and surveillance systems could be used to better effect when evaluating local Aboriginal health programs.

LHDs mentioned several factors that they considered barriers to implementing what works and building the evidence in Aboriginal health, including:

- poor recording of client/patient Aboriginal status at the point of care and in disease notification records, which was identified as a barrier to measuring health outcomes in Aboriginal populations
- evaluation design and choice of outcomes being strongly influenced by the perspectives of non-Aboriginal people
- sub-optimal staff capacity and capability to conduct research and evaluation with Aboriginal people and communities
- poor accuracy and completeness of some administrative health data.

Views of the AH&MRC staff

Interviewees from the AH&MRC highlighted several examples of program evaluations that had strong collaboration between NSW Health and the AH&MRC. The evaluation of Take Blaktion (an STI prevention campaign targeting Aboriginal young people) was considered a good example of a partnership because AH&MRC staff felt they were engaged during all stages of the evaluation and were equal partners.

CASE STUDY

NSW KNOCKOUT HEALTH CHALLENGE EVALUATION

Aboriginal people experience a significant health burden from chronic diseases. The NSW Knockout Health Challenge (KHC) is an annual community-led weight loss and healthy lifestyle challenge for Aboriginal people. The main element of the program is two 12-week weight loss challenges in which community teams of up to 30 members compete to achieve the greatest average weight loss. Following an initial feasibility study in 2012, the KHC was evaluated in 2013 and is currently being evaluated again. Participation in the KHC has been growing each year. In 2015, there were 1,200 participants from 33 communities.

Aims and methods: The 2013 evaluation aimed to describe KHC implementation, identify the impact of the program on weight loss and health behaviours and maintenance, and identify components associated with greatest weight loss/behaviour change. The evaluation used quantitative data analysis and qualitative interviews with stakeholders. The evaluation assessed participants' weight and health behaviours at four time points over nine months.

The current evaluation aims to investigate the implementation of, and impacts of participation in, the KHC from 2012 to 2015. Objectives are to investigate: whether participation has changed over time; the extent of repeat participation; changes in participant demographics and health profiles over time; and the short-term impacts of the program. The evaluation design is a secondary analysis of linked program data.

Findings and dissemination: The 2013 evaluation found the KHC feasible, acceptable and effective in reducing weight and promoting healthy lifestyles among participants, with these changes maintained up to nine months after the program. Following the 2013 evaluation, an ongoing system to support the monitoring of the program was developed and managed by The Australian Prevention Partnership Centre. The 2013 evaluation report is available [here](#) and a peer-reviewed paper describing findings is available [here](#).

Preliminary findings of the current evaluation indicate that the KHC is effective in reducing weight and promoting healthy lifestyles among Aboriginal people, and may contribute to closing the gap in health outcomes between Aboriginal and non-Aboriginal people. Future analyses should explore the characteristics of non-completers and the reasons for drop out. The current evaluation report is expected to be completed in 2019.



Interviewees described a recent increase in requests to partner with NSW Health on research and evaluation projects. It was felt that the large number of requests was stretching their capacity to engage.

Interviewees felt that effective research and evaluation collaborations between the AH&MRC and NSW Health were impeded by a tendency for NSW Health organisations to engage the AH&MRC late in the design of studies and both parties not having sufficient time to partner meaningfully.

AH&MRC staff also felt that NSW Health organisations could do more to share findings with, and acknowledge the contributions of, Aboriginal community-controlled health organisations, and that such actions should be built into existing partnership agreements.

3.2.4 SUMMARY AND IMPLICATIONS

NSW Health has established strategic frameworks, policies and entities that support evidence generation and knowledge translation in Aboriginal health. It is enabling Aboriginal health research by funding studies, partnering with academics, building research capability and developing data assets.

There may be opportunities to enhance these activities by: investing in, and supporting, fit for purpose intervention research and evaluation in Aboriginal health; improving the monitoring of investment in Aboriginal health research; fostering the ability of researchers to conduct Aboriginal health research in line with established principles; developing and supporting Aboriginal researchers; and strengthening the monitoring of initiatives through regular interrogation of program and administrative data.

Many Aboriginal-specific health initiatives are being, or have recently been, evaluated in NSW, with findings informing practice. However, most of these are NSW-wide or otherwise large-scale. There seems to be less evaluation of local Aboriginal health innovations that are smaller in scale but have potential to be scaled up, which may be reflective of poor results dissemination, rather than evaluations not being conducted. Another explanation is that the methods used for this evaluation failed to identify some LHD/SHN-level evaluation studies. Several mainstream NSW Health initiatives have been evaluated to measure their impact on Aboriginal people. However, broadly this seems to be an area requiring more attention.

NSW Health is supporting knowledge translation in Aboriginal health by engaging in research partnerships and consortiums, funding and implementing research conferences and symposia, and commissioning

evidence reviews and exchange meetings between researchers and clinicians. There is a need to continue these activities while exploring other ways to foster knowledge translation.

In NSW, estimated levels of reporting of Aboriginality in perinatal, admitted patient and emergency department datasets are high and have steadily increased since 2010. It is likely that various data development activities and efforts to improve the recording of patient Aboriginal status at the point of care have contributed to these improvements. Nevertheless, levels of reporting of Aboriginality could be improved in some LHDs and SHNs, especially in emergency department data. Continuing to improve the accuracy of reporting of Aboriginality in administrative datasets will improve these data as a resource for Aboriginal health research and evaluation.

The AH&MRC described several evaluations with strong collaboration between NSW Health and the AH&MRC. However, they also identified areas requiring improvement. Effective collaboration with the AH&MRC and/or ACCHSs and Aboriginal communities is fundamental to achieving Aboriginal community support of health studies. NSW Health organisations are therefore trialing innovative ways of engaging with Aboriginal organisations and communities. Still, ongoing improvement is required, especially in the context of evaluating NSW-wide initiatives.

ASSESSMENT OF PROGRESS AGAINST KEY ACTIONS*

Based on the data presented in this report, progress against the key actions of Strategic Direction 2 of the *NSW Aboriginal Health Plan 2013–2023* is moderate to good:

1. *Reviewing NSW Health research programs and identifying opportunities to increase their focus on Aboriginal health:* Moderate progress.
2. *Undertaking rigorous evaluations of Aboriginal-specific programs:* Good progress.
3. *Supporting quality evaluations of mainstream programs to ensure their impact on Aboriginal people is considered and measured:* Moderate progress.
4. *Implementing quality improvement strategies in data collection and reporting related to Aboriginal people across NSW Health settings:* Good progress.
5. *Disseminating and applying the findings of research and evaluation:* Moderate progress.
6. *Building the capacity of NSW Health staff to undertake Aboriginal health research and evaluation:* Some progress.

* Assessments are based on the investigators' appraisal of the evidence presented in this report with respect to the breadth and quality of relevant initiatives.

