

# Evaluation Plan Community-based Mental Health Programs: Community Living Supports (CLS) and Housing & Accommodation Support Initiative (HASI)

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### **Research Team**

Karen R Fisher (Chief Investigator), Christiane Purcal, Trish Hill, Gianfranco Giuntoli, Fredrick Zmudzki, Peri O'Shea, Philip Mitchell, Melinda Walker, Kim Beadman, Leanne Dowse

For further information:

Professor Karen R Fisher, karen.fisher@unsw.edu.au, +61 2 9385 7800

### **Social Policy Research Centre**

UNSW Sydney NSW 2052 Australia

T +61 2 9385 7800

F +61 2 9385 7838

E [sprc@unsw.edu.au](mailto:sprc@unsw.edu.au)

W [www.sprc.unsw.edu.au](http://www.sprc.unsw.edu.au)

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# Glossary

ACCHO	Aboriginal Community Controlled Health Organisation
AH&MRC	Aboriginal Health and Medical Research Council Ethics Committee
CALD	Culturally and Linguistically Diverse
CEA	Cost Effectiveness Analysis
CHeReL	Centre for Health Record Linkage
CLS	Community Living Supports
CUA	Cost Utility Analysis
FACS	Family and Community Services
HASI	Housing & Accommodation Support Initiative
HRQoL	Health Related Quality of Life
K10	Kessler Psychological Distress Scale
LGBTI	Lesbian, Gay, Bisexual, Trans, and/or Intersex
LHD	Local Health District
MDS	CLS, HASI and RRSP Minimum Data Set
MoU	Memorandum of Understanding
NDIS	National Disability Insurance Scheme
NGO	Non-Government Organisation
NOCC	National Outcomes and Casemix Collection
NSMHWB	National Survey of Mental Health and Wellbeing
OCHRE	Opportunity, Choice, Healing, Responsibility and Empowerment Plan
PHSREC	NSW Population and Health Services Research Ethics Committee
QALY	Quality Adjusted Life Year
RRSP	Resource and Recovery Support Program
SPRC	Social Policy Research Centre
UNSW Sydney	University of New South Wales

# 1 Background

Mental health disorders affect an estimated one in five Australians in any given year (Australian Bureau of Statistics, 2007). The 2007 National Survey of Mental Health and Wellbeing (NSMHWB) of adults provides information on the 12-month and lifetime prevalence of mental disorders in the Australian population. It was estimated from the survey that 7.3 million Australians will experience a mental disorder at some time in their life (ABS, 2008).

The term mental health disorder is often used to cover a wide variety of diagnoses such as anxiety, depression or schizophrenia, and the symptoms and severity of an illness can range from mild to severe impairment (Slade et al., 2009: 9). People with severe mental health disorders can experience detrimental impacts on both their psychological wellbeing as well as other aspects of their lives, such as housing and social relationships (Browne and Courtney, 2007). Previous research has shown that people with mental health disorders and disability often encounter difficulties in accessing and maintaining stable housing (Bleasdale, 2007) and many people who are homeless are affected by mental health disorders (Flatau et al., 2008).

Australia is undergoing a significant change in the delivery and funding of disability services. The introduction of the NDIS aims to follow a rights and inclusion based approach to disability support, including a move away from block-funded services to people having more choice and control over their supports. The NDIA recognises that recovery from mental ill-health, including psychosocial disability, is possible for everyone and that it is a deeply personal, non-linear journey. A culture of 'listen, learn, build and deliver' is considered a key to the NDIA's approach to mental health (Nicholas & Reifels, 2014; O'Halloran, 2014). The evaluation team members conduct multiple disability and mental health projects in the context of NDIS reforms and publish on the implications of the reforms, which will inform the evaluation design and analysis.

## 1.1 Mental health recovery: Importance of housing and psychosocial support

Recovery-focused support aims to enhance the capabilities of people with serious and persistent mental health disorders to identify and meet their own goals to maximise independence. Support includes a range of social, educational, occupational, behavioural and cognitive interventions that can take place in four domains: skills training, peer support, vocational services and consumer-community resource development of an array of community support (Barton, 1999: 526).

Several factors can support recovery from the impact of mental illness (Lysaker and Buck, 2008; Torrey and Wyzik, 2000). There is evidence that providing appropriate housing, clinical services and flexible support assists people with mental health

problems to maintain stable housing and that stable and secure housing contributes to positive benefits to people's mental health and general wellbeing (Reynolds and Inglis, 2001).

Recovery thus refers not only to processes and conditions of the person, but also to external conditions and social processes (Schon et al., 2009). At the level of service provision, the shift from hospital or similar accommodation to having a home and support in the community is a key feature of the shift to a recovery model. A home-like environment is usually a necessary precondition for recovery: it not only provides shelter but supports social and economic participation, a sense of belonging and control over one's environment and an opportunity to develop skills and responsibility and thus a greater sense of self-worth (Psychiatric Disability Services of Victoria, 2008), as evidenced in the second evaluation report of the Housing & Accommodation Support Initiative (HASI) (Bruce, Mc Dermott, Ramia, Bullen & Fisher, 2012).

### **Meeting the needs of people with complex support needs**

People with complex and interrelated support needs, including those from Indigenous backgrounds, regularly fall through gaps in the service and support system (Baldry & Dowse, 2013; Baldry, Dowse, & Clarence, 2012; Fisher, Gendera, Purcal, & Hill, 2014; Trofimovs & Dowse, 2014). Baldry & Dowse (2013) point out that this is evidenced by the disproportionate representation of certain population groups in NSW prisons: people with cognitive disability, mental illness and from Indigenous backgrounds (Haysom et al., 2014; NSW Ombudsman, 2008). In NSW, there exist a number of programs which have been designed to address such gaps in service delivery, in particular for Aboriginal people with disability or mental ill-health, for example, such as HASI Aboriginal and *Services Our Way* pilot program, or for people with high and complex support needs more broadly, for example, the Integrated Services Program (ISP).

The Resource and Recovery Support Program (RRSP) and HASI are designed to support people with mental illness to participate in the community, to improve their quality of life, maintain successful tenancies and, most importantly, assist people in their recovery from mental illness in the community. They aim to achieve this by providing mental health consumers with secure housing, accommodation support and clinical mental health services. The RRSP will be integrated into HASI over 2018/2019. Evidence from previous evaluations suggests that HASI has been successful at challenging the exclusion of people with complex support needs (e.g. homelessness and mental illness) (Muir, Fisher, Dadich & Abello, 2008, 2010; McDermott, Bruce, Ramia, Muir, Fisher, Bullen, 2015).

More recently, in 2016, the Ministry of Health introduced another program, the Community Living Supports (CLS). The CLS was introduced as part of the ongoing NSW mental health reform, which aims to provide people with severe mental illness

with appropriate, person centred psychosocial supports, so that they can live in the community.

The Social Policy Research Centre (SPRC) at UNSW Sydney (University of New South Wales) has been commissioned by NSW Health to conduct the evaluation of the Community Living Supports (CLS) and Housing & Accommodation Support Initiative (HASI) programs.

## **1.2 Evaluation aims and objectives**

The evaluation aims to assess the outcomes of the CLS and HASI programs in relation to their objectives, including how effective and culturally appropriate the program supports are for Aboriginal people.

The key evaluation objectives, which summarise the evaluation questions (Appendix A), are to:

- identify what works well in the programs and their implementation, and identify opportunities to improve the delivery and effectiveness of the programs
- assess the impact of the CLS and HASI and the extent the programs are achieving their stated objectives
- conduct an economic analysis of the programs to determine their cost-effectiveness, and potentially a cost utility analysis to examine how well costed the hours of support are.

This evaluation plan has been prepared in consultation with NSW Health. The plan includes:

- evaluation approach and methodology (Section 2)
- quality assurance processes, including project management, risk management, and ethics (Section 3).



# 2 Evaluation approach and methodology

## 2.1 Approach

The evaluation framework entails formative-summative, process, and cost-effectiveness components to assess the quality, outcomes and benefits of CLS and the new HASI to commence in the mid-2017 programs and make policy recommendations. The program logic for the CLS and HASI programs (Appendix B) underpins this approach.

The evaluation adopts a mixed-method longitudinal research design and a formative-summative program evaluation framework to fulfil the evaluation objectives. We are exploring opportunities for a comparison group comprising people on the HASI and CLS waiting lists. These people have been assessed to have the same support needs as current HASI and CLS clients, but continue to wait for the intervention. The intervention sample will be stratified in the analysis.

A mixed-methods design will allow the evaluation team to collect information from a breadth of sources and to triangulate them to develop a comprehensive, reliable and appropriate mental health and complex needs conceptual framework against which to assess the effectiveness and outcomes of the programs.

The evaluation plan remains in development while questions about data availability and appropriate data collection methods are discussed with the data managers and stakeholders. If preferred options, including a comparison group, are not confirmed, limitations to the evaluation will be acknowledged in the plan and reports.

## 2.2 Methodology

The evaluation methodology consists of the following five components, which are presented in detail in Section 2.4:

- 1) Review of program documentation and data collection methods.
- 2) Quantitative analysis of linked program data (CLS, HASI and RRSP Minimum Data Set [MDS]) and outcomes data for the CLS and HASI clients to measure change over time through time series analysis comparing before entry to the program and after entry; it will incorporate a comparison group, e.g. matched data or program eligibility registry (waiting list) NSW Health datasets.
- 3) Qualitative data collection with stakeholders consisting of three waves of phone interviews/focus group repeated with the same stakeholder managers and leaders from: NSW Health, NGO providers, LHD representatives, key program partners (FACS Housing, FACS Disability, Corrective Services), social housing

providers, and peak bodies, Departmental Management Group (DMG) members, NGO, LHD Stakeholder Forum, Aboriginal Community Reference (ACR) Group and Peak Stakeholder Forum.

- 4) Qualitative data collection at each of the three study sites – Hunter New England LHD, South Western Sydney LHD, and Western NSW LHD – with program participants (consumers), families, carers, informal supporters (friend, advocate), and local service providers consisting of two waves of:
  - i) 15 face-to-face interviews per site with program participants (consumers), for a total of 45 interviews in each wave (90 interviews in the two waves)
  - ii) 6 face-to-face or phone interviews per site with families, carers, informal supporters (friend, advocate), for a total of 18 interviews in each wave (36 interviews in the two waves)
  - iii) 3-4 face-to-face or phone interviews per site with local service providers, i.e. accommodation managers, LHD clinical staff, NGO staff (CLS-HASI), housing providers, Aboriginal service providers and criminal justice, for a total of 12 interviews in each wave (24 interviews in the two waves), prioritising local field workers/program implementers/team leaders.
- 5) Economic evaluation and cost modelling from quantitative linked data analysis, including a Cost Effectiveness Evaluation (CEA) and a Cost Utility Analysis (CUA).

Table C-1 in Appendix C is a schematic overview of how each method helps address the evaluation questions.

## 2.3 Evaluation phases and timeline

The project will run from November 2017 to January 2020 (Table 1) and is organised in four overlapping phases.

**Table 1 Evaluation timeline**

Description	Original date	Revised date	SPRC
Initiation meeting	done		
Refine method	done		
Evaluation plan ( <b>Deliverable 1</b> )	done		
Ethics: <ul style="list-style-type: none"> <li>• NSW Health PHSREC – re MDS</li> <li>• AH&amp;MRC – re entire project</li> </ul> SW Sydney LHD (lead HREC for fieldwork sites) – re fieldwork	done	April	
Stakeholder presentations in Sydney ( <b>Deliverable 2</b> )	done		

<b>Description</b>	<b>Original date</b>	<b>Revised date</b>	<b>SPRC</b>
* Initial analysis of HASI and CLS program data: transfer data analyse data	Feb 2018 Mar-Apr 2018	<b>May</b> <b>May-July</b>	Trish, Fred
Arrange data linkage: • Application to CHeReL • Ethics application PHSREC Possibly other ethics applications	February 2018	<b>CHeReL application:</b> <b>June/July</b>	Trish, Fred
Program review: Transfer documents Analyse documents (iterative with stakeholder consultations)	February 2018 March 2018	- <b>Apr-May</b>	- Gianfranco
* Qual data collection: Stakeholder consultations 1 Confirm sites recruitment consultations	February 2018 March 2018	<b>Apr-Jun</b>	Gianfranco
* Qual data analysis	April 2018		Gianfranco
Annual report #1 – internal for reference group and stakeholders to inform practice. Public version. <b>(Deliverable 3)</b>	30 June 2018	<b>Jul-Aug</b>	
Decide key or emergent evaluation issues #1 and #2 for up to 2 focus reports due October 2018	July 2018	<b>August</b>	
Stakeholder presentations <b>(Deliverable 4)</b>	July / August 2018		Karen
* Qual data collection: Stakeholder consultations 2 recruitment consultations	July 2018 August 2018		Gianfranco
* Qual data collection: Fieldwork 1 recruitment fieldwork	May/June 2018 June – Aug 2018		Peri, Gianfranco
* Qual data analysis	September 2018		Peri, Gianfranco
Up to 2 focus reports on key or emergent evaluation issues #1 and #2 <b>(Deliverable 5)</b>	30 October 2018		
Stakeholder presentations <b>(Deliverable 6)</b>	November 2018		Karen
CHeReL application	Feb 2018	<b>Dec</b>	
Deliver data linkage	January 2019		
* Quant data analysis: program and outcomes data	February 2019		Trish, Fred
Annual report #2 <b>(Deliverable 7)</b>	30 June 2019		
* Qual data collection: Fieldwork 2 Recruitment fieldwork	May/June 2019 June – Aug 2019		Peri, Gianfranco
* Qual data analysis (fieldwork 2)	September 2019		Peri, Gianfranco

<b>Description</b>	<b>Original date</b>	<b>Revised date</b>	<b>SPRC</b>
Deliver data linkage	August 2019		
* Quant data analysis: program and outcomes data	September 2019		Trish, Fred
* Quant data analysis: economic evaluation and cost modelling	September 2019		Fred
* Qual data collection: Stakeholder consultations 3 recruitment consultations	July 2019 August 2019		Gianfranco
* Qual data analysis (consultations 3)	September 2019		
Stakeholder presentations ( <b>Deliverable 8</b> )	September 2019		Karen
Up to 2 focus reports #3 and #4 ( <b>Deliverable 9</b> )	30 October 2019		
Stakeholder presentations ( <b>Deliverable 10</b> )	November 2019		Karen

### **Phase 1: Project set up and design (November 2017 – April 2018)**

In Phase 1, the evaluation team will:

- finalise the evaluation approach decisions outlined in this document (**Deliverable 1**) with NSW Health and the Departmental Management Group (DMG), including: establishing project management communication plan; confirming evaluation questions (Appendix A) against the program logic (Appendix B); confirming location of the evaluation sites, i.e. Hunter New England LHD, South Western Sydney LHD, and Western NSW LHD; engaging identified key contacts and stakeholders in sites to build the critical fieldwork relationships; refining qualitative and peer-methodologies with input from advisors, e.g. Indigenous, consumer, and clinical staff involved in the Evaluation Reference Group facilitated by NSW Health, the Aboriginal Evaluation Committee and the UNSW Community Reference Panel; and finalising the stratified sampling framework and fieldwork protocols (Section 2.2)
- review the program documentation and data collection methods to suggest possible improvements to NSW Health (Section 2.4.1)
- conduct initial data analysis of program data (MDS) to identify the demographic profile of HASI and CLS participants and generate a baseline profile to develop the outcome analysis plan (Section 2.4.2)
- review data sources and content for the quantitative, economic evaluation and cost modelling components of the evaluation and comparison groups

- prepare and submit the ethics applications needed for the qualitative and quantitative components of the project (Section 3)
- organise a first wave of telephone interviews with selected stakeholders from NSW Health, NGO providers, LHD representatives, key program partners (FACS, Corrective Services), housing and peak bodies, and focus groups with the four programs' stakeholder forums (Section 2.4.3). The data collection period is February-March 2018. This first wave of interviews and focus groups with stakeholders will inform **Deliverable 2** (February 2018 presentations to stakeholder forums), and **Deliverable 3** (Initial Evaluation Report, June 2018)
- present the approved evaluation plan and framework to stakeholder forums and peak stakeholders in Sydney (**Deliverable 2**).

## **Phase 2: Formative-summative evaluation, data collection with stakeholders (May 2018 – August 2019).**

In Phase 2, the evaluation team will:

- conduct a second and third wave of phone interviews with stakeholders from NSW Health, NGO providers, LHD representatives, key program partners (FACS, Corrective Services), housing and peak bodies, and focus groups with the four programs' stakeholder forums to observe and measure change over time in the program implementation, document emerging issues and suggest possible improvements (formative evaluation). Data collection periods are:
  - July-August 2018. This second wave will inform **Deliverables 4, 5 and 7** (July 2018 focus reports, July/August stakeholder presentations, and second annual report in June 2019)
  - July-August 2019. This third wave will inform **Deliverables 7 through to 15** (Table 1)
- conduct preliminary client outcomes analysis of CLS and HASI MDS data.

## **Phase 3: Outcomes and formative evaluation (May 2018 – September 2019).**

In phase 3, the evaluation team will:

- visit the three evaluation case study sites twice to conduct face-to-face interviews with consumers, their families, local service providers and relevant program staff about program support and outcomes associated with their

participation in the programs. This qualitative data will contribute to the outcomes and formative evaluation. Data collection periods will be:

- I. May – August 2018 – qualitative data collection to inform **Deliverable 7** (second annual report), **Deliverable 4** (July/August 2018 presentations to stakeholder forums) and **Deliverable 6** (November 2018 presentations to stakeholder forums)
  - II. May – August 2019 – qualitative data collection to inform **Deliverable 9** (October 2019) and the suite of final **Deliverables 10 to 15**.
- conduct outcome analysis of program data. The team will develop data linkage between the CLS-HASI MDS and administrative record data on client outcomes from datasets managed by program partner agencies where available, including NSW Health, Corrective Services, Justice Health and FACS Housing. The analysis will consider changes in client outcomes over time (and if available, in comparison to the potential population of CLS-HASI participants). This analysis will inform the final **Deliverables 10 to 15**.

#### **Phase 4: Final analysis, triangulation and final reporting and presentations (September 2019 – January 2020)**

The qualitative data from the focus groups, individual interviews and secondary program data review will be thematically analysed and synthesised against the evaluation questions. The analysis will start simultaneously with the data collection from Phase 2 to allow formative analysis and iterative interpretation of the findings.

The secondary data analysis in this phase will build on the findings in the outcomes analysis in Phase 3 to examine longitudinal changes over the two-year post commencement period in outcomes for HASI and CLS participants and conduct more in-depth analysis on outcomes for key participant subgroups to inform the economic evaluation.

## **2.4 Methods**

### **2.4.1 Review of program documentation and data collection methods**

The research team will from NSW Health receive and analyse: requests for tenders (RFTs), templates and other relevant documents connected to the operation and governance of CLS and HASI.

The documents will be uploaded, managed and analysed in the qualitative data software NVIVO.

## 2.4.2 CLS-HASI MDS data analysis

The CLS-HASI MDS data analysis plan builds on the previous evaluations of HASI conducted by SPRC. The data analysis will be conducted in three phases aligning with three annual reports. The overarching objectives of the secondary data analysis are to:

- 1) provide a profile of the demographic characteristics of the CLS-HASI cohort and compare this to a potential population of clients
- 2) analyse outcomes for CLS and HASI clients prior to and after participation in the program, and if possible compare these outcomes with the outcomes for a comparison group
- 3) integrate client support services and outcomes with program cost modelling for the economic components of the evaluation.

**Phase 1 Profile of the CLS-HASI cohort.** Phase 1 of the secondary data analysis, to be prepared for the report submitted in June 2018, will include a participant, context and support profile as at February 2018 in the MDS and exploratory analysis of outcomes data in the MDS. This analysis aims to:

- 1) provide a profile of the demographic characteristics of the clients within the CLS-HASI programs as at February 2018
- 2) identify contextual characteristics for individuals in the CLS-HASI programs, including contextual circumstances, risk factors, diagnosis, housing arrangements and support arrangements
- 3) identify participation, duration and types of support provided by the CLS-HASI programs to individual clients – date and source of referral for entry into CLS-HASI, support provided, referrals and exits
- 4) examine the outcomes data in the MDS to identify the quality of the variables (percentages of valid responses within the CLS and HASI cohorts) and where possible, given samples sizes, report on outcomes data for the CLS and HASI cohorts by key demographic characteristics.

The data to be analysed in this phase will be a cross sectional snapshot of the CLS-HASI MDS cohorts at March 2018 obtained from InforMH (NSW Health system information and analytics branch). The analysis will calculate frequencies and rates for the different demographic characteristics for the CLS and HASI cohorts. The analysis will also calculate the number of hours of support provided to individual clients, overall hours of support and different types of support. Where samples sizes permit, the support provided will be analysed by key demographic variables (e.g. age and gender).

The preliminary analysis will examine client profiles in the context of HASI and CLS targeting of people who have high and complex needs as well as specific target populations for CLS including:

- people already living in social or community housing who may not be accessing the support they need
- people serving community-based detention orders
- people exiting correctional facilities
- Aboriginal people (including CLS benchmarks for number of Aboriginal clients)
- people living in licensed boarding houses (given the conclusion of Boarding House HASI in December 2016)
- Refugees.

Variables within the MDS to be used in this analysis include:

- 1) Program Category (categories: CLS, HASI and RRSP)
- 2) Demographic characteristics: age group (based on date of birth), sex (male, female, not stated), LGBTI (identifies as lesbian, gay, bisexual, trans or intersex – Yes/No), Aboriginal or Torres Strait Islander origin (identifies as of Aboriginal and/or Torres Strait Islander origin or not), country of birth (Australia, main English speaking countries, other countries), preferred language (English, Language other than English), broad geographical location (postcode aggregated to LHD)
- 3) Contextual circumstances: refugee status (client is currently classified as a refugee (Yes/No), exited a correctional facility in the last 12 months (Yes/No), serving a community-based detention order (Yes/No), serving a community treatment order (Yes/No), experiencing domestic and family violence (Yes/No)
- 4) Risk factors: current smoking status (Yes/No), drug or alcohol dependency (Yes/No)
- 5) Diagnosis (primary diagnosis) (9 categories), secondary diagnosis (9 categories)
- 6) Participants' housing arrangements: housing status/accommodation type (15 categories)
- 7) Support arrangements: risk management and care plan (Yes/No), client on pre-discharge plan (Yes/No), family and carer involvement (Yes/No), receiving support from the NDIS (Yes/No)
- 8) Entry into CLS-HASI: source of referral (the source from which the client was referred for the current service - 15 Categories), client referred due to anti-social warning (Yes/No), start date in program (the date the client has started in the current program with the current provider)
- 9) Support provided: number of hours provided per reporting period (monthly aggregated up to six monthly) in: daily living skills, medication support, accessing other services, social activities, family connections, Aboriginal community participation, program governance, care plans, travel, Aboriginal cultural reference groups, medical/health activities and psychosocial intervention.



- 10) Referrals made within reporting period (Yes/No), each month aggregated up to six-month period)
- 11) Program Exits: exiting this program this period (Yes/No), planned or unplanned exit, reasons for exiting (6 categories), exit destination (7 categories)
- 12) Outcome variables to be examined in MDS if data quality permits, including:
  - Number of hospital admissions (mental health related)
  - Number of hospital admission (medical related)
  - Number of emergency department presentations
  - Camberwell Assessment of Need Short Appraisal Schedule) CANSAS
  - Life Skills Profile (LSP-16)
  - Recovery Assessment Scale – Domain and Stages (RAS-DS) Total Score
  - Living in the Community Questionnaire (LQC) Policy Index Score

**Phase 2 Preliminary client outcomes analysis.** Phase 2 of the secondary data analysis, to be prepared for the report in June 2019, aims to:

- identify baseline entry to program dates for all current clients in CLS-HASI programs. For HASI clients, this may include linkage conducted by InforMH through Medical Record Number (MRN) between current MDS and previous MDS to extract start date in HASI program
- identify duration of participation in CLS-HASI
- identify data source for comparison group
- identify preliminary pre- and post-program outcomes for the CLS-HASI cohort.

The preliminary client outcome analysis will examine the overarching HASI and CLS program outcomes including:

- improved mental and physical health outcomes
- improved social participation among program clients, including families and carers where practicable
- enhanced integrated care for program clients
- reduced unnecessary admissions and inpatient stays for mental illness
- reduced homelessness and secure accommodation for people with mental illness

Where outcome data is dependent on data linkage components, analysis will overlap or be undertaken in phase 3 as below. Additional implicit program outcomes will also be examined where sufficient data is available, for example increased flexibility in support hours in response to individual needs, i.e. compared to previous support packages, or early transitional support from an inpatient facility through discharge to community living.

Phase 2 data sources will include linkage of the CLS and HASI MDS with the following data sources through CHeReL:

- 1) NSW Admitted Patient Data Collection (APDC)
- 2) NSW Emergency Department Data Collection (EDDC)
- 3) NSW Registry of Births, Deaths and Marriages (RBDM) (deaths)
- 4) NSW Mental Health Ambulatory Data Collection (MH-AMB)
- 5) Australian Coordinating Registry (ACR) Cause of Death Unit Record File (COD URF)
- 6) Mental Health - Outcomes and Assessment Tool MH - OAT
- 7) National Outcomes and Casemix Collection (NOCC).

The variables to be linked from each of these data sources are listed in Appendix C.

Potential data sources for the comparison group include 3DN, administrative data on individuals in the CLS and HASI waiting list and ABS survey data.

The analysis will examine the following outcomes for clients for two years prior and two years after the start date in the program. The timeline for the data linkage will be established after the earliest and latest start dates for CLS-HASI clients are known.

Outcome measures will be annualised for each individual. Changes in mean and median values and scores will be identified for the whole cohort and for population subgroups within the cohort (and as sample sizes permit by age, gender, CALD, Aboriginal and Torres Strait Islander and by hours of support). Appropriate tests will be used to identify statistically significant differences in pre and post measures for the groups.

Outcome measures in the linked data sources will include:

NSW Admitted Patient Data Collection (APDC):

- number of inpatient admissions per individual per year
- number of days spent as admitted patient per individual per year

NSW Emergency Department Data Collection (EDDC):

- number of emergency department presentations per person per year

NSW Mental Health Ambulatory Data Collection (MH-AMB):

- number of community mental health contacts per individual per year
- number of different types of mental health activities (Activity Code Mental Health) per year

Mental Health - Outcomes and Assessment Tool MH – OAT Psychological distress scores:

- HoNOS

- LSP-16
- K10+–LM or K10–L3D

National Outcomes and Casemix Collection (NOCC):

- HoNOS (Health of the Nation Outcome Scales)
- LSP-16 (an abbreviated version of the Life Skills Profile)
- Focus of Care (prior to July 2017)
- Mental Health Phase of Care (PoC) (since 1 July 2017)
- Kessler-10 Plus (K-10+) – K10 scores before and after program entry are significant for the economic evaluation as a potential basis to estimate validated Health Related Quality of Life (HRQoL) and related Quality Adjusted Life Years (QALYs).

Other outcome measures will include:

NSW Registry of Births, Deaths and Marriages (RBDM) deaths and Australian Coordinating Registry (ACR) Cause of Death Unit Record File (COD URF):

- number of deaths per year for the cohort.

We are exploring with the data managers whether social housing, criminal justice, NDIS and primary care data can be linked. If linked data is not possible, we will also explore access to aggregate data. It is possible that neither linked data or aggregate data will be available for NDIS and primary care.

### 2.4.3 Program cost modelling and economic evaluation

Phase 2 will integrate available outcome data from the data linkage analyses and combine this with program costing data based on program budgets and reported mix of hours across service types and levels of support. The preliminary cost and outcome data will be developed into an economic Markov model framework for program Cost Effectiveness Analysis (CEA) and, where sufficient K10 scores are available, an additional Cost Utility Analysis (CUA) model to examine cost per Quality Adjusted Life Year.

**Phase 3 Final client outcomes analysis.** Phase 3 of the secondary data analysis, to be prepared for the final report submitted in January 2020, will build on the findings in Phase 1 and 2 and aims to identify:

- 1) all client outcomes for the CLS and HASI cohort who have been in the program for two years before and after program commencement based on 4 time periods (2 years before, 1 year before, 1 year after and 2 years after)
- 2) additional outcomes for clients including tenancies and criminal justice as feasible in the data

- 3) analysis of all outcomes for population subgroups of interest where possible (e.g. gender, age and average hours of support)
- 4) and analyse, where possible, outcomes for comparison group and CLS-HASI client cohort
- 5) average changes over time for individual clients through a longitudinal analysis.

Phase 3 will use the dataset created by the linkage in Phase 2, with the addition of data linked from the following data sources:

- 1) Offender Integrated Management System (OIMS) Corrective Services
- 2) Justice Health
- 3) NSW FACS Housing data

The analysis for phase 3 will depend on the quality of the linkage and the sample sizes of CLS-HASI clients identified in these data sources and the quality of the comparison group. Outcome measures will be annualised for each individual. Changes in mean and median values and scores will be identified for the whole cohort (and for population subgroups within the cohort, and as sample sizes permit by age, gender, CALD, Aboriginal and Torres Strait Islander, and by hours of support). Changes in scores for individuals over the four time periods will be estimated. Appropriate tests will be used to identify statistically significant differences in pre and post measures for the groups and individuals.

The outcome measures to be examined in this data will include all measures included in Phase 2, with the addition of any data from the above three data sources to address each of the evaluation questions (Table C-1).

## Sampling frame

**Table 2 Sampling frame for MDS and linked data analysis**

Method	Sample sizes n	Collection timeframe	Data transfer or collection process
Program data <b>MDS</b>	HASI~1135 CLS~700	April-May 2018	NSW Health to provide HASI MDS unit record data to CHeReL for 12/2014-12/2018 and CLS data from 6/2016–12/2018 NSW InforMH outcomes data for 2 years prior to start date for HASI participants identified by the MRN until 12/2018 and 12/2014 – 12/2018 for CLS participants
Program <b>outcomes</b> data	HASI~1135 CLS~700	February-March 2019	HASI MDS data 12/2014-12/2018 CLS MDS data 6/2016-12/2018 NSW InforMH outcomes data for 2 years prior to start date for HASI participants identified by the MRN until 12/2018 and 12/2014 – 12/2018 for CLS participants

## 2.4.4 Qualitative data collection with program staff, other relevant stakeholders, consumers and their families

The evaluation entails:

- Three waves of up to 5 phone interviews and one focus group with stakeholders from NSW Health, NGO providers, LHD representatives, key program partners (FACS, Corrective Services), housing and peak bodies (Table 1). The focus group will be conducted with members of the Departmental Management Group, comprising Ministry of Health, FACS, Corrective Services and Justice Health.
- Six focus groups during HASI and CLS government forums/program meetings with stakeholders from:
  - NSW Department Managers (Health, FACS, Justice Health, Corrective Services) – state-wide focus, interviews or 1 focus group
  - NGO, LHD Stakeholder Forum – state-wide focus, 1 focus group
  - Aboriginal Community Reference (ACR) Groups – these operate in each of the 15 Local Health Districts (LHDs) in NSW and comprise members of local aboriginal organisations as well as members of the local Aboriginal community – 3 focus groups, one in each of the three case study LHDs
  - Peak Stakeholder Forum – state-wide focus, 1 focus group including representatives from Mental Health Coordinating Council, Being – Consumer Advocacy Group, Mental Health Carers NSW, Centre for Aboriginal Health, Aboriginal Health and Medical Research Council, Aboriginal Affairs and NSW Federation of Housing Associations.
- Two waves of face-to-face interviews at each of the three study sites with program participants (consumers), families, carers, informal supporters (friend, advocate) and local service providers:
  - 15 face-to-face interviews per site with program participants (consumers), for a total of 45 interviews in each wave (90 interviews in the two waves)
  - 6 face-to-face or phone interviews per site with families, carers, informal supporters (friend, advocate), for a total of 18 interviews in each wave (36 interviews in the two waves)
  - 3-4 face-to-face or phone interviews per site with local service providers, i.e. accommodation managers, LHD clinical staff, NGO staff (CLS, HASI), for a total of 12 interviews in each wave (24 interviews in the two waves).

## Peer research

Two consumer-led research strategies will be adopted. The first is that peer researchers, including mental health consumers and Aboriginal community members, will contribute to evaluation design, data collection and analysis. The peer research is being organised by the research team's mental health peer researcher, Peri O'Shea and the UNSW Community Reference Panel Aboriginal staff, Melinda Walker and Kim Beadman. The particular peer contributions will depend on local fieldwork considerations, which will be discussed in each of the three LHDs during the remainder of the design stage. Depending on local capacity and preferences, expected steps will include:

1. Identify at least one interested mental health consumer for local peer research
  - Discuss with the LHD, CMO, Being, Aboriginal ACCHO (or equivalent contact point) their suggested method for us to work with 1-3 peer researchers
  - In the absence of local peer researchers, seek interest from 1-3 local peer workers through the groups above
  - In the absence of interested local peer workers, seek interest from at least one other local mental health consumer
2. Prepare peer researchers
  - Build relationship with local peer researchers through the local contacts, by phone, Skype and in person where possible
  - Seek their preferences and strengths for involvement in research, including design advice, fieldwork participation, analysis and application of the results
  - Supplement their existing strengths with relevant information, training and discussion as appropriate to the person's preferences and timeframe
  - Develop support strategies through preparation (confidentiality, respect, trigger boundaries), debriefing, trusted person, research buddy (local or SPRC, e.g. cultural or mental health)
3. Conduct research with peer researchers
  - Involve the peer researchers in their preferred research activities, including implementing the support strategies.

The second strategy for consumer-led research is engaging the UNSW Community Reference Panel for advice on design and analysis. The panel's Aboriginal coordinators will seek advice from Aboriginal panel members, who are community members and mental health consumers, during the design and analysis stages. The

panel members will be asked for advice about draft processes and draft analysis, which will then be used to refine the outputs.

## Sampling frame

It is important that the fieldwork capture the perspectives of a wide range of people. In addition to the sampling frame for interviews outlined in Table 3, we will include other factors in the sampling to ensure a diversity of perspectives, including gender, Aboriginality and level of support needs.

**Table 3 Interview sampling frame**

Method	Sample sizes n	Collection timeframe	Data transfer or collection process
Interviews with <b>other key stakeholders</b> (Ministry, program partners, FACS, identified in Phase 1)	5-6 representatives	Three waves: 1) May-June 2018 2) July-August 2018 3) July-August 2019	Phone
Discussion/ <b>Focus groups</b> with other stakeholders	All forum participants		1. Departmental Management Group (DMG) 2. NGO, LHD Stakeholder Forum 3. Aboriginal Community Reference (ACR) Group 4. Peak Stakeholder Forum
Interviews with <b>consumers</b>	15 per site CLS-HASI Up to 45 in total	Two waves: 1) May-August 2018 2) June-August 2019	Fieldwork visits at three sites to be confirmed, face-to-face interviews <ul style="list-style-type: none"> <li>• Hunter New England LHD</li> <li>• South Western Sydney LHD</li> <li>• Western NSW LHD</li> </ul>
Interviews with <b>family</b> /carers (matched to consumer)	6 CLS-HASI per site = 18 in total		Fieldwork visits at three sites <b>and</b> phone
Interviews with <b>local/direct service</b> providers (e.g. NGO staff, clinical, housing, and case managers)	3-4 staff per site = 12 in total		Fieldwork visits at three sites <b>and</b> phone

Note: Wave 1 interviewees will be replaced if not available at Wave 2.

## Interview recruitment

Participation in the study is voluntary, and recruitment will be undertaken using an arm's length approach. Recruitment of stakeholders will be conducted as follows:

The research team will send invitation emails to the NGO and LHD contacts in the three case study sites, and attach an evaluation information sheet and consent form and interview questions. Stakeholders who are interested will reply to the research team.

Recruitment of consumers and their families will be conducted as outlined below. Depending on local capacity and preferences, expected steps will include:

1. A framework to recruit 15 consumers in each location for whom it is not a risk to their mental health to participate, and who give permission for the researchers to contact them:
  - Apply stratified recruitment in Campbelltown and Dubbo—ensure at least 5 participants with cultural and linguistic diversity and at least 5 Aboriginal and Torres Strait Islander people, within the total sample of 45 across the 3 sites. This is sufficient for a qualitative sample on these variables.
  - Campbelltown:
    - a. select the first 5 people from a culturally or linguistically diverse background who most recently entered CLS-HASI
    - b. select the first remaining 10 people who most recently entered CLS-HASI
  - Dubbo:
    - a. select the first 5 people from an Aboriginal or Torres Strait Islander background who most recently entered CLS-HASI
    - b. select the first remaining 10 people who most recently entered CLS-HASI.
  - Newcastle: select the first 15 people who most recently entered CLS-HASI.
2. Preparation for recruitment
  - discuss with the local partners (LHD, peer researchers, CMO, Aboriginal ACCHO (or equivalent contact point) the suggested process and make adjustments
  - refine with local partners on methods to recruit, contact consumers, time and place for interviews and mental health safety
  - introduce the study to CMO staff so that they can contact consumers who meet the criteria
  - CMO staff to discuss and give information to the selected consumers and seek permission to give their name to the researchers, with consumer's support strategy information (preferred place for interview, preference for trusted person, disclosure and referral)
  - CMO staff to allocate interview time and place during researchers' site visit dates—if consumers prefer to liaise directly with the researchers, the CMO staff will exchange contact details with the consumer or researcher depending on the consumer's preference.
3. Conduct recruitment and interviews according to agreed protocols for each person.



## **Qualitative data analysis**

The interviews with stakeholders, consumers and family members and friends will be audio recorded and transcribed. They will subsequently be coded and analysed using a thematic approach, which will help to identify similarities and differences across the participants' experiences of support in relation to key aspects of the CLS-HASI programs.

The analysis will start simultaneously with the data collections (both in Phase 1 and in Phase 2) to allow formative analysis and iterative interpretation of the findings against each of the evaluation questions (Table C-1).

The qualitative data analyses will be conducted with the aid of the qualitative analysis software program NVivo.

## **2.4.5 Economic evaluation and cost modelling from quantitative linked data analysis**

The established HASI and complementary recent enhancement of the CLS program initiative supports the New South Wales mental health reform strategy, focusing on community-based care and ensuring people can live well in the community with a mental illness (NSW Mental Health Commission, 2014). The effectiveness and related cost effectiveness of these types of mental health programs continue to develop and apply methodologies which have been established and routinely used for some decades in other areas of the healthcare system. Ongoing health economic research consistently indicates that these approaches, particularly including quality of life aspects, increasingly indicate a strong economic case to increase investments in mental healthcare (Luyten, Naci, & Knapp, 2016).

The reasons these methods are not as widely used in mental healthcare settings are multifaceted but include complexities with administering and collecting specific quality of life instruments, validated for use in economic evaluation, which are often not suitable or may not be sufficiently sensitive in complex mental health settings. Although these tools are non-clinical and generally consist of 5 to 12 multiple choice questions, they present an additional survey component which is often difficult given complex client populations and vulnerable groups. Under NOCC reporting protocols, mental health programs routinely collect mental health measures including the Kessler Psychological Distress Scale (K10). For this reason, recent research has established a validated correlation between the K10 and separate commonly used quality of life instruments, including the Australian developed Assessment of Quality of Life (AQoL) - 8D, which indicates the highest correlation with the disease-specific measures and the best goodness-of-fit transformation properties for use in cost effectiveness modelling where utility measures are not collected (Mihalopoulos, Chen, Iezzi, Khan, & Richardson, 2014). This provides an innovative potential to incorporate these rigorous methodologies into mental health program evaluation

with no additional administrative overheads, and accordingly is included in the proposed approach for this CLS-HASI evaluation.

The economic evaluation approach will integrate client outcomes with the cost modelling (next section) and includes both a Cost Effectiveness Evaluation (CEA), for assessing cost effectiveness in terms of improved mental health, reduced hospital admissions or other program outcomes, as well as potentially a Cost Utility Analysis (CUA), incorporating the generic quality of life dimension. The CUA component of the economic modelling is dependent on sufficient before and after K10 scores as the basis to estimate validated quality of life utility scores.

The economic modelling provides the framework to calculate incremental cost-effectiveness ratios for the incremental cost per hospital admission prevented or per unit of mental health score improved, and the incremental cost per QALY gained in the CLS-HASI group. This will be compared with the potential comparison group established in the quantitative component of the project, perhaps utilizing a matching sample. The economic evaluation will also incorporate estimated cost of service usage where available from the quantitative data linkage with program partner agencies, including Corrective Services, Justice Health and FACS Housing for CLS-HASI clients before and after entering the program. This will provide a perspective of NSW system wide service cost offsets.

The economic modelling framework also provides important methods of estimating the distribution around costs and health outcomes and calculating the confidence intervals around the incremental cost effectiveness ratio(s). A one-way sensitivity analysis will be undertaken around key cost variables, and bootstrapping (probabilistic sensitivity analysis) will be developed to estimate the joint uncertainty in all parameters. The economic modelling will be undertaken using TreeAge Pro, a specialized modelling application widely used in health economic evaluation. An implicit part of the modelling framework will be documentation of all parameters, variables and model structure, which may also be separately presented in Microsoft Excel to provide transparency of the modelling calculations.

The economic benefits resulting from the HASI and CLS programs may provide positive cost implications beyond the study period. For this reason, to examine cost effectiveness in this longer term context, the results will also be extrapolated in the modelling framework, perhaps forward over 5 to 10 years, to investigate the medium and longer term returns that may result from sustained client outcomes and pathways.

## **Cost modelling**

In addition to the economic evaluation, the cost modelling will examine detailed average costs across Local Health Districts (LHDs) for available cost dimensions, including CLS-HASI client subgroups and service types. The program budgets are available to the evaluation and provide details of anticipated clients and estimated

number of hours of support each day based on support levels, defined by the programs as:

- Very High                    8 hrs/day
- High                            5 hrs/day
- Medium                        3 hrs/day
- Low                             5 hrs/week or 0.7 hr/day

In line with the flexible and individualised service types and levels of support, providers may adjust the mix of service types and support hours over time, which will be assessed through the actual hours reported through the MDS program datasets. The service profiles will be examined for trends and service patterns within the overarching program funding (HASI ~\$40 million, CLS ~\$20 million per annum) and the related service delivery by service types, location, and client sub groups. The cost modelling may also be supplemented with data from questionnaire surveys with the clients, family members, LHD, housing providers and support workers, as well as with data from previous research, e.g. Wood et al. (2016).

Other cost elements may include the establishment of the new flexible models and transition costs to these the new programs, and may also incorporate reference to wider pricing structures, for example the NDIS price guide. The detailed average cost of service types, anticipated clients and support hours by LHD are documented in the request for tender documents which were used in the recent program recommissioning process, and the contracted total budgets are effectively capped under these arrangements.

The cost modelling will also integrate with the cost effectiveness analysis, which may establish model scenarios to examine the relative effectiveness and costs, for example relating to early return home resulting from CLS on hospital discharge; a potential reduction in readmissions and avoidance of preventable and repeated acute crisis, in the context of client pathways of stabilization and recovery, improved mental and physical health outcomes. Other scenarios could potentially include aspects of sustaining stable housing or reduced homelessness for people with mental illness.

The economic evaluation and cost modelling will integrate closely with the quantitative components of the project including the data linkage content, utilizing all available MDS data through the MH-OAT collection across client outcomes and casemix data for clients of specialist mental health services. This may include admitted patient care at a psychiatric unit in a public hospital, Community Residential Care and ambulatory care where the client is not concurrently an admitted or community residential client.

The cost modelling will establish comparative before and after outcome and service usage profiles based on available data linkage for prior mental and physical health, hospital service usage and other outcomes and, where sufficient data is available,

reflect responsiveness of support to adjust hours as a client's condition improves or declines.

## Sampling frame

**Table 4 Sampling frame for economic evaluation and cost modelling**

Method	Sample sizes n	Collection timeframe	Data transfer or collection process
Economic cost effectiveness evaluation	HASI~1135 CLS~700	February-March 2019	The economic evaluation will integrate with program and outcome data as above, including mental health (e.g. K10) data for potential transformation to CUA modelling. It will also collate program funding, cost data and resource usage from the program data linkage for cost estimation.
Cost modelling data	HASI~1135 CLS~700	February-March 2019	Cost modelling will align with the economic cost effectiveness work and will be supplemented by detailed assessment of program budgets by client sub groups, service mix and level of support content.

## 3 Quality assurance processes

### 3.1 Governance

SPRC will report to the Supported Living, Mental Health Branch of NSW Health.

Evaluation design advice will be sought from the Evaluation Reference Group, which has representation from NSW Health and Being, and from the Aboriginal Evaluation Committee, which has representation from the Aboriginal Community Controlled Health Organisation (ACCHO) or a similar organisation in each of the three case study LHD sites. The Aboriginal Evaluation Committee will be facilitated by the UNSW Community Reference Panel Aboriginal staff, Melinda Walker and Kim Beadman.

### 3.2 Communication strategy

In Phase 1 of the project, progress meetings between NSW Health and the research team will occur on a fortnightly basis. This will include discussions of progress against the agreed evaluation plan, any issues or risks that may impact progress, and any potential variations to the project scope, budget or deliverables.

Meeting frequency for the following phases will be agreed with NSW Health in Phase 1.

### 3.3 Ethics

The ethics for this project entails three approvals. Applications will spell out the evaluation strategies and team competencies to reduce the risk of causing psychological harm and minimising risk of trauma to the study participants with lived experience of mental illness. The applications will ensure voluntary participation and confidentiality; the latter will also apply when analysing the program outcomes and MDS data for the evaluation. The ethics committees relevant to this application are:

- **NSW Health and NSW Population and Health Services Research Ethics Committee (PHSREC)** – for data collection in evaluation sites as well as MDS and outcome data collected by the NGO organisations and held by the Ministry of Health (InforMH)
- **Aboriginal Health and Medical Research Council Ethics Committee (AH&MRC)** – anticipated submission date is 22 January 2018
- **A lead LHD ethics committee from the three case study sites (and Northern Sydney for state-level data collection)** – two applications will be submitted: the first to cover the qualitative data collection with stakeholders

and quantitative analysis of MDS data in Phase 1; the second to cover fieldwork with people with lived experience of mental illness and the peer methodologies. This approach would facilitate an early start of the Phase 2 data collection for the formative evaluation.

The research will be designed to adhere to the requirements outlined in the New South Wales Code of Conduct and the NSW Government's Procurement Policy Framework as per RFT.

Due to the project timeframes, successful ethics application approvals are a cornerstone of the timely completion of the evaluation. The team is experienced at preparing ethics applications for all three committees listed above. We will rely on our expertise in designing research for NSW Health and other projects such as the Opportunity, Choice, Healing, Responsibility and (Empowerment (OCHRE) plan evaluation with Aboriginal people in the preparation; therefore, we would anticipate ethical permission be expedited for this project.

**Culturally sensitive research practice.** UNSW and SPRC have an existing Research Memorandum of Understanding in several communities in NSW, with strong representation of Indigenous people and Aboriginal organisations. We will consider our existing research partnerships and community links in the identification of the fieldwork sites and partners in the evaluation process.

To ensure successful approvals, ethical and culturally relevant research, the design of the qualitative methods – recruitment, peer methodology, interview / research methods and feedback to consumer participants – will be guided by community expertise and by local Aboriginal organisations in the fieldwork sites. In the applications, we will address the [AH&MRC Ethics Committee key principles](#) of conducting research into Aboriginal Health, for example, by establishing an Aboriginal Evaluation Committee that is anticipated to comprise members of the Aboriginal Community Controlled Health Organisation (ACCHO) relevant in each of the three case study sites:

- Awabakal Newcastle Aboriginal Co-operative Limited (Hunter New England LHD)
- Wellington Aboriginal Corporation Health Service (Western New South Wales LHD)
- Sydney South West Local Health District (Sydney South West Local Health District). This is not one of the AH&MRC member ACCHOs; however, AH&MRC research support advised us that it can still provide support for the study.

We use a flexible and inclusive approach to conducting research with Aboriginal people. A range of innovative and accessible methodologies will be available, including face-to-face interviews (approx. 90 minutes), observations, informal

discussions, storytelling, group activities, written or documented responses and interviews conducted with Easy English questions with pictorial support.

### **3.4 Risk management**

Table 5 outlines some of the challenges that could arise over the course of the research, their potential consequences, their likelihood and mitigation strategies. These risks will be monitored and addressed during the research, and any new risks identified will be added to this table and managed appropriately.

**Table 5 Risks and mitigation strategies**

Risks	Likelihood	Impact on evaluation & stakeholders	Risk management response
1. Evaluation activities interfere with support delivery	Low	Medium	Evaluation design (with a strong focus on program data) reduces the impact on service providers and consumers.
2. Ethics committees' approvals unsuccessful or delayed	Medium	High	We have a team highly experienced in preparing and applying for all ethics committees relevant for this evaluation. Staff will rely on previous experience and Aboriginal community expertise in design of fieldwork methods and protocols.
3. Early stage data is limited	Medium	Medium	Two different ethics applications will be submitted for stakeholders and consumers/families. This will allow us to collect data early in the process.
4. Engagement of consumers not effective	Low	High	We have a wealth of experience in engaging marginalised groups, including from the earlier HASI evaluations.
5. Non-approval from Aboriginal clients/ organisations/ communities of evaluation activities	Low	High	We will build on our existing research partnerships and MoU with Indigenous communities and organisations.
6. Methodology inappropriate or flawed	Low	Low	The mixed methods design and strong team reduce the possibility: range of leading experts in disability/mental health, evaluation, and peer-methodologies in Australia.
7. Delay in data access (NGO, LHD) and low quality of data, including content for data linkage	High	High	Evaluation team will begin communicating early with key stakeholders and CHeReL in order to identify how to access program data. Progress of the data collection will be clearly communicated to stakeholders throughout the project.  The team's evaluation experience with data collectors and holders (NSW Health, InforMH, community service providers) will contribute to avoiding and resolving data access problems.
8. Submission of deliverables is delayed	Low	Medium	SPRC have strong project management and risk management protocols. Christiane Purcal, PM on the project, will establish a detailed communication protocol to identify risks and manage them as they arise.
9. Evaluation fails to critically analyse the programs	Low	High	We have an expert team in evaluations of government social health programs and a carefully designed mixed-methods approach based on various data sources to compensate for possible shortcomings.
10. Evaluation does not produce useful and actionable recommendations	Low	High	Our team is renowned for undertaking rigorous research (governed by university standards) that produces comprehensive and useful policy guidance to inform program improvement and policy decisions.
11. Evaluation fails to identify issues affecting efficient program delivery	Low	High	The mixed methods design, strong evaluation team, formative evaluation approach, and input by the Health and Evaluation Steering Committee reduce the likelihood of such limitations.
12. Attrition of consumers in qualitative data rounds	Medium	High	Replacement recruitment will substitute consumers who leave through attrition.



### **3.5 Reporting and data storage**

The final report will be published, with approval from NSW Health, on the SPRC website once complete. In addition, a non-technical summary will be produced and provided to research participants.

Any data collected during this research will be stored, in accordance with ethics and University requirements, for a period of seven years. This will be stored in a de-identified form on a secure server, with access limited to the research team.

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# Appendix A Evaluation questions

## Program effectiveness

1. How well have CLS and HASI achieved their outcomes?
2. What differences are CLS and HASI making to clients?
3. To what extent have CLS and HASI met their objectives in regard to providing community-based psychosocial supports that support people in their recovery from severe mental illness?
4. Is demand being met?
5. What most determines the acceptance or rejection of applicants?
6. How effectively are referral pathways functioning? What improvements can be made?
7. How has the programs' structure (based on hours of support rather than packages) worked or not worked?
8. How has the programs' governance supported the programs? What improvements can be made to the programs' governance?
9. How has the programs' capacity to commence supports to people prior to discharge from inpatient units worked or not worked?
10. What are the critical factors that lead to success in regards to:
  - a. effective partnerships between clinical and psychosocial supports
  - b. achievement of clients' recovery goals
  - c. reductions in relapses and avoidable hospitalisations
  - d. supports delivered to boarding house clients previously supported by Boarding House HASI and transition of these clients to the National Disability Insurance Scheme (CLS)
  - e. stable tenancies (HASI)
  - f. integration of RRSP funds with HASI funds including effective transition of low needs clients to other supports
  - g. exit from the programs.
11. What aspects of the programs are promoting success and/or failure?
12. What locally specific variations are there in terms of the implementation of the programs?
13. Are changes to the programs' operation required?

14. Are changes to data collection and/or monitoring required?
15. How effectively have the programs reached the relevant target groups?
16. Which target groups are benefiting from the programs the most? What improvements are needed to better meet the needs of target groups that are not benefiting from the programs as much as others?
17. How effective and culturally appropriate are supports for Aboriginal people? What has been the effect of integrating Aboriginal HASI with the broader HASI program?
18. How do Aboriginal clients fare compared with non-Aboriginal clients?
19. How is access for people with mental illness who are living in social or community housing being promoted and ensured? Are referrals linked to anti-social behaviour warnings resulting in improved and appropriate access?
20. How is access for community-based offenders being improved?
21. How effectively are the programs meeting the needs of older people? How has access for older people improved?
22. How is recovery in the context of family relationships being realised? How are the needs of clients' families and especially their children being addressed?
23. How well have clients been linked or referred to services including GPs, NDIS and other services?
24. How are the programs operating in the context of the NDIS?
25. What do housing providers contribute to local partnerships in each program, but especially in HASI?

### **Non-government organisations**

26. How do non-government organisations contribute to the programs?
27. What is the profile of the non-government organisation staff in terms of qualifications and experience, including the peer workforce?
28. What approaches to recovery are prevalent in non-government organisations? How do these approaches align or differ? How are these differences managed?
29. How do non-government organisations interact with Local Health District mental health teams? How could this be improved if necessary?
30. How do non-government organisations interact with housing providers? How could this be improved if necessary?
31. How do non-government organisations interact with Corrective Services? How could this be improved if necessary?

32. What strategies are non-government organisations using to ensure that service delivery for Aboriginal clients is culturally appropriate and that Aboriginal communities and organisations are appropriately engaged with the programs?
33. How are non-government organisations working with refugees?
34. How are non-government organisations funded in the same Local Health Districts (in both HASI and CLS) operating together?

**Financial issues**

35. How cost-effective are the programs?
36. How well costed are the hours of support?

## Appendix B Program logic

<b>Problem definition</b>	Insufficient care and support for people with severe mental illness in the community results in frequent acute hospital admissions, longer stays in inpatient units, more restrictive care than is necessary and failure to recover.
<b>Inputs</b>	<p><b>Funding</b></p> <p>Approximately \$60M annually to provide community-based psychosocial supports</p> <p><b>Evidence base</b></p> <ul style="list-style-type: none"> <li>• Recovery model</li> <li>• Literature supporting models of community-based mental health care and support</li> <li>• Minimum data set</li> <li>• Service data</li> <li>• Program budgets by LHD</li> <li>• Annual reports</li> </ul> <p><b>Partnerships</b></p> <p>Comprehensive care and support provided by a partnership between:</p> <ul style="list-style-type: none"> <li>• Non-government mental health care providers (psychosocial supports)</li> <li>• Local Health District clinical teams (clinical supports)</li> <li>• Family and Community Services and housing providers (housing support) (for HASI only).</li> </ul> <p><b>Referral sources</b></p> <ul style="list-style-type: none"> <li>• Local Health Districts</li> <li>• Family and Community Services (for CLS)</li> <li>• Corrective Services NSW (for CLS)</li> <li>• Justice Health and Forensic Mental Health Network</li> <li>• Government and non-government Aboriginal community stakeholders</li> </ul>
<b>Program activities</b>	<p>NGO providers are required to:</p> <ul style="list-style-type: none"> <li>• establish, develop and maintain local partnerships with Local Health Districts and housing providers where relevant</li> <li>• establish, develop and maintain strategies to engage Aboriginal communities in the programs and provide culturally appropriate supports for Aboriginal people</li> <li>• provide initial assessment of client need in collaboration with Local Health District clinical services</li> <li>• provide psychosocial supports to clients in accordance with need, including prior to discharge from inpatient mental health units where necessary</li> </ul>



	<ul style="list-style-type: none"> <li>• participate in joint care planning and monitoring of client progress towards recovery goals</li> <li>• appropriately engage and collaborate with families and carers of clients</li> <li>• effectively collaborate with Family and Community Services and social and community housing providers to identify and support people who are living in social and community housing but not accessing the support they require</li> <li>• effectively collaborate with Corrective Services to ensure that community-based offenders with severe mental illness are provided with supports</li> <li>• effectively collaborate with Justice Health and Forensic Mental Health Network to ensure that people with severe mental illness who are exiting correctional facilities are provided with supports</li> <li>• establish effective pathways for other target groups, including Aboriginal people, people living in boarding houses and refugees</li> <li>• provide data on program activities, client characteristics and types of supports provided</li> <li>• establish effective pathways out of the programs, including to the National Disability Insurance Scheme</li> <li>• provide appropriate supports to people living in boarding houses until supports become available through the National Disability Insurance Scheme</li> <li>• transition clients with low needs out of the programs into relevant supports where needed, and redirect funds to people with higher needs.</li> </ul>
<p><b>Outputs</b></p>	<p>Quantitative performance data will include but may not be limited to the following:</p> <p>Number of clients</p> <p>Age of clients</p> <p>Sex of clients</p> <p>Residence/location</p> <p>Primary and secondary diagnosis</p> <p>Comorbidity including alcohol and drugs</p> <p>Housing status</p> <p>Referral source including referral due to antisocial behaviour in social housing</p> <p>Duration of waiting times</p> <p>% of people provided supports prior to discharge from inpatient units</p> <p>% Aboriginal clients</p> <p>% CALD clients</p> <p>% clients who are social housing residents</p>

	<p>% clients who are community-based offenders</p> <p>% clients serving community treatment orders</p> <p>% clients who have exited a correctional facility</p> <p>% clients reporting improved wellbeing</p> <p>% clients who are refugees</p> <p>% LGBTI clients</p> <p>Number of hospitalisations for mental health</p> <p>Number of emergency department visits</p> <p>Lengths of stay in hospital</p> <p>% clients in NDIS</p> <p>% physical health improvements, including smoking</p> <p>Duration in program</p> <p>Number of referrals</p> <p>Referral information</p> <p>Outcome measurement tool scores</p> <p>Number of exits</p> <p>Reasons for exit</p>
<b>Outcomes</b>	<p>Improved mental health and physical health outcomes for program clients</p> <p>Improved social participation among program clients</p> <p>Enhanced integrated care for people with mental illness</p> <p>Reduced unnecessary admissions and inpatient stays for mental illness</p> <p>Reduced homelessness and stable tenancies for program clients (HASI only).</p>

# Appendix C Overview of evaluation methods

Table C-1 Evaluation components by key questions and methods

Evaluation component	RFT Questions*	Evaluation methods							
		REVIEW	QUANT	QUAL	QUAL	QUAL	QUAL	QUAL	QUANT
		<b>Program review</b> (documentation, data collection methods)	Consumer <b>outcome data</b> (health), demographic data (MDS)	<b>Consumer face-to-face interviews</b>	<b>Family, carer interviews</b> face-to-face or phone	<b>Interviews service providers</b> (case managers, housing)	Ministry, stakeholders, <b>program partners (phone interviews)</b>	Focus groups stakeholders, program partners	<b>Economic evaluation and cost modelling</b>
Data gathering approach/ process		Provided by NSW Health	Provided by NSW Health (InforMH) and CHeReL link	Field visits (including peer-interviewing)	Field visits and off-site phone	Field visits and off-site phone	Phone interviews	During HASI and CLS gov forums /program mtgs	Provided by NSW Health / CHeReL linkage
Key evaluation questions									
Formative and Process Evaluation	How effective are the programs in achieving their stated objectives, what improvements can be made?	all d. - y.	x	x	x	x	x	x	x
	- determination of eligibility criteria, meeting demands, program access/ promotion of services	d., e., s.	x				x	x	x
	- improved access for community-based offenders	t.		x			x	x	x
	- meeting the needs of older people and improved access	u.		x			x	x	x
	- effective referral pathways	f.					x	x	x
- working of programs' structure (on hours of support rather than packages)	g.					x	x	x	x

Evaluation component	Evaluation methods								
		REVIEW	QUANT	QUAL	QUAL	QUAL	QUAL	QUAL	QUANT
	RFT Questions*	<b>Program review</b> (documentation, data collection methods)	Consumer <b>outcome data</b> (health), demographic data (MDS)	<b>Consumer face-to-face interviews</b>	<b>Family, carer</b> interviews face-to-face or phone	<b>Interviews service providers</b> (case managers, housing)	Ministry, stakeholders, <b>program partners (phone interviews)</b>	Focus groups stakeholders, program partners	<b>Economic evaluation and cost modelling</b>
Data gathering approach/ process		Provided by NSW Health	Provided by NSW Health (InforMH) and CHeReL link	Field visits (including peer-interviewing)	Field visits and off-site phone	Field visits and off-site phone	Phone interviews	During HASI and CLS gov forums /program mtgs	Provided by NSW Health / CHeReL linkage
Key evaluation questions									
- governance structure and its impact	h.	x				x	x	x	
- provision of support prior to transition from inpatient units	i.					x	x	x	
- what factors determine effective partnerships (clinical, psycho-social)	j.	x				x	x	x	x
- aspects of the programs promoting success and/or failure, operational changes required	k., m.	x				x	x	x	x
What local variations are there in terms of both programmes implementations	l.	x				x	x	x	x
What changes to data collection are required	n.	x				x	x	x	
-targeting to relevant groups (who benefits most, least)	o., p.		x			x	x	x	
Provision of culturally sound support to Indigenous people	q.			x	x	x	x	x	
Effect of integration of HASI and HASI Aboriginal	q.			x	x	x	x	x	
Meeting the needs of families (esp. children)	v.			x	x	x	x	x	
Referral pathways and linking in with mainstream community services (GPs, NDIS supports)	w.			x	x	x	x	x	

Evaluation component	Evaluation methods								
		REVIEW	QUANT	QUAL	QUAL	QUAL	QUAL	QUAL	QUANT
	RFT Questions*	<b>Program review</b> (documentation, data collection methods)	Consumer <b>outcome data</b> (health), demographic data (MDS)	<b>Consumer face-to-face interviews</b>	<b>Family, carer interviews</b> face-to-face or phone	<b>Interviews service providers</b> (case managers, housing)	Ministry, stakeholders, <b>program partners (phone interviews)</b>	Focus groups stakeholders, program partners	<b>Economic evaluation and cost modelling</b>
Data gathering approach/ process		Provided by NSW Health	Provided by NSW Health (InforMH) and CHeReL link	Field visits (including peer-interviewing)	Field visits and off-site phone	Field visits and off-site phone	Phone interviews	During HASI and CLS gov forums /program mtgs	Provided by NSW Health / CHeReL linkage
Key evaluation questions									
Operating in the context of the NDIS	x.			x	x	x	x	x	
Input from housing providers to local partnerships (HASI)	y.					x	x	x	
<b>Subset Non-govt organisations</b>									
Strengths of non-gov organisations contributed to program	z.			x	x	x	x	x	
How do NGOs interact with housing, LHD health teams, and justice services	cc., dd., ee.			x	x	x	x	x	
Profile of staff workforce capacity including peers	aa.					x		x	
Approaches to recovery; working with Indigenous and refugee clients	bb., ff., gg.					x	x	x	
Collaboration within LHD	hh.					x	x	x	
How well are CLS and HASI achieving their outcomes for consumers	a., b		x	x	x	x	x	x	x
- provision of psycho-social / community-based supports for people to recover from mental illness	c.		x	x	x	x	x	x	x
- what factors determine achievement of recovery goals, stable tenancies, reductions in relapses etc.	j.			x	x	x	x	x	x

Evaluation component	RFT Questions*	Evaluation methods							
		REVIEW	QUANT	QUAL	QUAL	QUAL	QUAL	QUAL	QUAL
		<b>Program review</b> (documentation, data collection methods)	Consumer <b>outcome data</b> (health), demographic data (MDS)	<b>Consumer</b> face-to-face <b>interviews</b>	<b>Family, carer</b> interviews face-to-face or phone	<b>Interviews service providers</b> (case managers, housing)	Ministry, stakeholders, <b>program partners</b> (phone <b>interviews</b> )	Focus groups stakeholders, program partners	<b>Economic evaluation and cost modelling</b>
Data gathering approach/ process		Provided by NSW Health	Provided by NSW Health (InforMH) and CHeReL link	Field visits (including peer-interviewing)	Field visits and off-site phone	Field visits and off-site phone	Phone interviews	During HASI and CLS gov forums /program mtgs	Provided by NSW Health / CHeReL linkage
Key evaluation questions									
- how do Aboriginal clients fare compared with non-Aboriginal clients	r.		x	x	x	x	x	x	x
Recovery in the context of family relationships (children)	v.			x	x	x	x	x	
Linking in with mainstream community services (GPs, NDIS supports)	m.			x	x	x	x	x	x
How cost-effective are the programs: CLS and HASI	ii.		x			x	x	x	x
How well costed are the hours of support?	jj.		x			x	x	x	x

Note. \* Appendix A.

# Appendix D Variables for CHeReL analysis

## Variables required from data sources to be linked to CLS-HASI MDS data by CHeReL:

1. NSW Admitted Patient Data Collection (APDC)
  - Days in psychiatric unit
  - Emergency status
  - Emergency Department Status
  - Episode start date
  - Episode day stay – length of stay in hours
  - Episode length of stay
  - Episode of care type
  - Financial program
  - Involuntary days in psychiatric unit
  - Qualified bed days
  - Last psychiatric admission date
2. NSW Emergency Department Data Collection (EDDC)
  - Arrival date
  - Arrival time
  - Departure ready date
  - Departure ready time
  - Principal ED Diagnosis
  - Type of visit
3. NSW Mental Health Ambulatory Data Collection (MH-AMB)
  - Activity Duration
  - Activity Start Date
  - Activity Code Mental Health
  - Mental Health Additional Diagnosis (3 fields)
  - Mental Health Diagnosis Group Flag
  - Mental Health Diagnosis Code
  - Mental Health Provider Role
  - Mental Health Provider type
  - Principal Service Category
  - Provider Financial Program PPDC
  - Provider Financial Sub Program/Category PPDC
  - Service Contact Mode
  - Unique\_Visit\_Identifier
  - Source of Referral Type
4. NSW Registry of Births, Deaths and Marriages (RBDM) deaths and Australian Coordinating Registry (ACR) Cause of Death Unit Record File (COD URF)
  - Date of Death
5. Mental Health - Outcomes and Assessment Tool MH – OAT HoNOS (Health of the Nation Outcome Scales)

LSP-16 (an abbreviated version of the Life Skills Profile)  
K10+LM or K10-L3D (two versions of the Kessler-10).  
Collection Date  
Reason for collection  
Mental Health Service Setting  
Principal Diagnosis  
Focus of care  
Mental Health Legal Status

6. National Outcomes and Casemix Collection (NOCC)

State/Territory Identifier  
Report Period Start Date  
Report Period End Date  
Service Unit Type  
Collection Occasion Identifier (links all below)  
Episode Service Setting  
Collection Occasion Date  
Reason for Collection  
State/Territory Identifier  
Episode Identifier  
HoNOS Version  
HoNOS Items 1- 12  
LSP-16 Version  
SP-16 Items 1-16  
K10+LM Version  
Collection Status  
K10+LM Item 01- 14  
K10L3D Version  
K10L3D Item 01-14  
Principal Diagnosis  
Additional Diagnosis 1  
Additional Diagnosis 2  
Phase of Care (since 1 July 2017) – Focus of Care prior  
Mental Health Legal Status