Report to NHMRC

Best Practice in Early Psychosis Intervention for Australian Indigenous Communities: Literature Review, Indigenous Mental Health Worker Consultation, and Case Study

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EXECUTIVE SUMMARY
In December 2000 the National Health & Medical Research Council (NHMRC) called for expressions of interest in its first Strategic Research Grant in Mental Health. The aim of the Grant was to evaluate the effectiveness of early psychosis teams. One of the six advertised objectives was: To allow examination of how services can best be provided for young people among disadvantaged groups such as rural and Aboriginal and Torres Strait Islander (ATSI) communities. The successful application (Catts SV, O’Toole BI, Carr VJ) was a proposal to assess health outcomes of a cohort of patients with psychotic disorder presenting for the first time to mainstream public mental health services using routinely collected data. The project, called the NHMRC Clinical Practice Improvement Network for Early Psychosis (CPIN-EP) quantitatively assessed the first six to 12 months of treatment in a cohort of 451 early psychosis patients, few of whom identified as ATSI. Therefore, CPIN-EP conducted a qualitative sub-study of what might potentially be best practice service models for the delivery of early psychosis intervention to Australian Indigenous communities. The purpose of this Report is to describe the results of this examination.

There were three components to the sub-study: 1) a literature review; 2) a consultative process with Indigenous Mental Health Workers (IMHWs) in south eastern Queensland and; 3) a case study of the Sunshine Coast Cultural Healing Program (CHP-SC) deemed to be a best practice mainstream mental health service by the IMHWs consulted. The scope of the literature review was broad, encompassing the entire mental health and drug and alcohol fields, and drew on published and unpublished reports. This breadth enabled the use of the qualitative research validity testing procedure, triangulation, to identify promising service models for which there was convergence of effectiveness evidence across multiple service settings and across multiple information sources (i.e., the literature review, IMHW consultation, and the case study). Although a key assumption was made: That best practice early psychosis intervention necessitated the involvement of mainstream specialist services, this did not limit our search for evidence of best practice, which was exhaustively pursued.

Enclosed in this Report are two manuscripts, both submitted to the Australian & New Zealand Journal of Psychiatry, and both rejected for publication by this Journal. One manuscript contains the literature review and the other describes the IMHW consultation and CHP-SC case study. The common theme across both manuscripts is that specialist Indigenous sub-teams (rather than specialist early psychosis sub-teams) embedded in mainstream mental health services, which incorporate culturally safe practice and are fully integrated with Indigenous primary care services, may be promising best practice models, not just for young people with early psychosis but for delivering adult specialist mental health services to urban and regional Indigenous communities for all types of mental health problems. Formal evaluation of this model was recommended as a matter of urgency.
The editorial decision to reject the enclosed manuscripts was both surprising and disappointing given that the papers represented years of work and the results may potentially be important to improving mental health services for Indigenous communities. The investigators took the view that the editorial process was questionable (some might say unprofessional) in relation to one of the manuscripts because when the literature review paper was re-submitted with revisions and replies addressing the first round of reviewer criticisms, these appear to have been ignored by the next set of reviewers, and instead a new set of criticisms were made upon which the editorial decision to reject the paper for publication was based. The criticisms in the second round were in a sense unanswerable (though we were not given the opportunity to respond to them). For instance, the paper’s assumption that effective early psychosis intervention necessitated the involvement of specialist mainstream services was considered invalid by the Editor. Another criticism was of the Discussion section which “… could be construed as racist by some Aboriginal and Torres Strait Islander people. Such claims of racism could lead to adverse publicity for the Journal and the RANZCP and should be avoided …”. Moreover the paper was criticised for presumed lack of Indigenous input because we used the term “Indigenous Australian”: “I presume they do not [have an ATSI member] because a number of Aboriginal and Torres Strait Islander people find the term “Indigenous Australian” offensive and an Aboriginal and Torres Strait Islander member of the group may have pointed this out to them.” The non-publication of the literature review and the eventual publication of IMHW consultation and CHP-SC case study only as a brief report in *Australasian Psychiatry* (also included in this *Report*) have led to our decision to prepare this report for NHMRC with inclusion of an indication as to why the manuscripts were rejected for publication.

Once again, the chief investigators acknowledge the support of the project staff on the CPIN-EP team, and the staff and managers in participating mental health services. Not all Chief Investigators were directly involved with the Indigenous sub-study and this is reflected in the authorship lists on the two manuscripts. We wish to thank members of the South Eastern Queensland Indigenous Mental Health Forum and the staff of the CHP-SC, especially Travis Shorey and Jennifer McClay. We take this opportunity to again acknowledge NHMRC funding support for this project.

Stanley Catts, 30 June 2013
Title: Best practice in early psychosis intervention for Australian Indigenous communities: A literature review

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ABSTRACT (Word Count = 241)

Objective: No attempt at cultural adaptation of early psychosis intervention (EPI) for young Indigenous Australians has been published. Our aim was to identify promising elements of best practice relevant to mainstream mental health service (MHS) delivery of EPI to Indigenous communities. Methods: A scoping review of the published and unpublished Australian Indigenous health literature was carried out. A validity testing strategy for qualitative research, triangulation, was then used to identify promising service models. Results: We found that almost no high quality studies evaluating the effectiveness of mainstream MHSs adapted for Indigenous Australians have been published in the scientific literature. Our review identified three examples of a promising mainstream service model with potential for delivering EPI (the Indigenous sub-team), and two elements applicable to best practice EPI in rural and remote services (telepsychiatry and specialist psychiatric outreach assistance). Conclusions: We conclude that specialist EPI could be delivered by Indigenous sub-teams (rather than specialist EPI teams) embedded in large mainstream MHSs. These teams incorporate culturally safe practice and can be fully integrated with Indigenous primary health care and community services. In rural and remote services, specialist psychiatric outreach assistance and telepsychiatry (at least when this function is embedded in an Indigenous sub-team) appear likely to support best practice EPI. The development of evidence-based culturally appropriate mainstream MHSs for Indigenous Australians, including ones for EPI, appears improbable without attitudinal changes on the part of both non-Indigenous health professionals and Indigenous academic and political leadership.

Key Words: aboriginal, mental health, health services research, service model evaluation, schizophrenia.
INTRODUCTION

In the absence of formal national data about the incidence and prevalence of mental disorder among Aboriginal and Torres Strait Islanders (ATSI), information about rates of psychiatric disorder rely on administrative data sets on hospital separations. Overall, Indigenous Australians are hospitalised for a mental disorder at nearly twice (1.9 fold) the rate of non-Indigenous Australians [1]. Expert commentators have interpreted excess use of hospitals by Indigenous people as indicative of delays in treatment until hospital admission is unavoidable. The discrepancy particularly affects Indigenous patients with schizophrenia spectrum disorders, who are even more likely (increase for males 2.7 fold, females 2.5 fold) to be admitted to hospital [1]. Compounding the effects of poor access to community care, once hospitalised, Indigenous patients with schizophrenia are only half as likely to receive the same level of diagnostic and therapeutic intervention as their non-Indigenous counterparts (see Box 4 in [2]).

First-episode psychosis sampling from regions with large Indigenous populations shows patients from these communities tend to be older and more disabled at the time of first receiving treatment than those derived from non-Indigenous communities [3], consistent with reports that Indigenous patients with psychotic disorder are older [4] and sicker when seen by mainstream services [5]. These findings suggest that Indigenous young people have poor access to early psychosis intervention (EPI) services [6], a major concern because schizophrenia [7-11] and bipolar disorder [12] are associated with progressive brain changes. As specialist EPI services compared to standard generalist care, appear to offer greater disease coverage [13] and mitigate against relapse [13, 14], they may improve long-term outcomes [15]. Although effectiveness data in favour of specialist EPI has been collected...
across different European cultures [13], no studies have examined what are the most effective service delivery models for Indigenous young people with early psychosis in Australia or anywhere else in the world. A recent report on the feasibility of broad implementation of EPI services in Australia noted the long overdue need for specific guidelines for working with Indigenous people with psychosis [16].

An Australian National Health and Medical Research Council (NHMRC) strategic mental health research project called the NHMRC Clinical Practice Improvement Network for Early Psychosis (CPIN-EP), which was approved by ethics committees of participating MHS as a quality assurance study, carried out a quantitative evaluation prospectively assessing intervention processes and outcomes of the first 6-12 months of treatment in a cohort of 451 patients presenting for the first time with psychotic disorder in eight mainstream Area MHSs (AMHSs). As too few Indigenous patients were registered in the prospective evaluation (≈ 2%) for a sub-group analysis, and because NHMRC had directed the CPIN-EP project team to examine Indigenous best practice, a focused sub-study of EPI service models for Australian Indigenous people was undertaken. The first part of this sub-study, a literature review, is herein described.
METHODS

A preliminary electronic search of the indexed literature indicated that no evaluations of EPI services for Indigenous communities, and in fact few effectiveness evaluations of any type of mental health interventions culturally adapted for Indigenous populations, had been published in the scientific literature. Therefore, we took a broad approach to our examination of studies relevant to EPI for Indigenous communities comprehensively drawing upon published and un-published literature in both the mental health and addiction fields. Our systematic database (Medline Ovid, PsychINFO, Web of Science) search of the indexed Indigenous health literature (using search terms: indigen* OR aborigin*) was performed in combination with firstly, early psychosis search terms (early psychosis OR early schiz* OR first episode psychosis OR first episode schiz*), and secondly with general mental health search terms (psychiat* OR psychol* OR mental health). The un-indexed unpublished or web-published literature was identified starting with the Australian Indigenous Health InfoNet (www.healthinfonet.ecu.edu.au) and the Australian Institute of Health and Welfare (AIHW) (www.aihw.gov.au/closingthegap) websites. Both websites list literature chronologically by year of document completion or publication. Manual searching of author institutions and reference lists found other websites holding documents which in turn enabled the identification of a diverse Indigenous health literature in snowball fashion. Google.com searches were also a valuable source of unpublished literature. No date restrictions were placed on indexed or un-indexed publications (most recent searches completed by July 2012) but research studies not carried out in Australia were excluded. Using a scoping strategy to synthesise the literature, documents were conceptually organised into five fields considered relevant to EPI services for Indigenous populations. Documents were then tabulated within each of the five fields and presented as the five Tables of the Results section.
Repeated searching of the published and unpublished literature using variations of the above strategies yielded few quantitative evaluations of Indigenous mental health interventions. Additional efforts to identify evaluation work in the field were then made by Indigenous health conference attendance and email contact with researchers based in Australia who were identified from searches as doing evaluations in Indigenous mental health. All States and Territories Directors of Mental Health were contacted to request release of unpublished evaluation reports held by their departments. When we could not find additional quantitative evaluations, we ceased searching.

As others reviewing effectiveness evaluations of Indigenous interventions have found [17], it was not feasible to do a systematic or quantitative review so a scoping approach to synthesising the literature was adopted [18]. This approach emphasises breadth and comprehensiveness [19]. That is, study inclusion and exclusion criteria are not based on quality of studies but on relevance to describing the field of interest. Compared to systematic or meta-analytic reviews, scoping reviews may include many different types of intervention with various outcomes in different target subpopulations, thereby allowing themes and key issues that recur in different settings to be identified. A disadvantage of scoping reviews is that the synthesising process and grouping judgements are not nearly as transparent and may be prone to distortion by the theoretical perspective of the reviewers. In judging the relevance of a study or service model, a key assumption was made: That best practice EPI necessitated the involvement of mainstream specialist services. In judging a service model as relevant to best practice EPI, the following criteria were considered: 1) to what extent was the model likely to support key elements of the *Australian Clinical Guidelines for Early Psychosis* (*ACG-EP*) [20]; 2) was the model deemed culturally safe or appropriate by Indigenous stakeholders; 3) was the model evaluated quantitatively to some extent (e.g. at least via
administrative data); 4) was the model likely to be youth and family attractive; and 5) was the model embedded in mainstream specialist mental health services, or offered strong referral pathways to specialist mainstream services, including inpatient facilities. The extent to which the model might support ACG-EP was judged by likely concordance with the ACG-EP in terms of: 1) links with primary care settings that facilitate early detection; 2) accessibility to specialist services; 3) priority given to engagement as central to treatment; and 4) capacity to offer comprehensive multidisciplinary interventions (medical, psychological, psychoeducational, drug and alcohol, vocational, educational and housing interventions) via team-based case management. In line with validity testing in qualitative research [21, 22], we highlighted for further attention mainstream service models where there was convergence of effectiveness evidence across multiple service settings (‘triangulation’), especially across primary care, specialist mental health, and addiction settings. As our review was primarily an examination of evidence-based practice, for each tabulated item we focused on whether evaluation had occurred and if so its quality.
RESULTS

The results are presented in five Tables each summarising a group of related items: policy documents (Suppl. Table 1); mental health service models (Table 2); assessment instruments (Suppl. Table 3); discrete interventions (Suppl. Table 4); and clinical resources supporting Indigenous mental health service delivery (Suppl. Table 5). Each item is briefly described, including its evaluation, in the Tables.

1. Australian Indigenous health policy

Documents were selected and tabulated if they were Indigenous health policies directly relevant to mental health service (MHS) performance, social and emotional well-being (SEWB), drug and alcohol services, or early intervention and health promotion. Eleven key national policy documents are presented in Suppl. Table 1.

Policy evaluation was found to be either non-existent or sub-standard. Most evaluations of Indigenous health policy appear to have been done by non-academic contract program evaluators selected by the Government. No evaluation used formal quantitative approaches; all were of limited quality and unlikely to meet peer-reviewed publication standards (e.g. [23] – or see www.equator-network.org). Promotion, prevention and early intervention for Indigenous mental health received no evaluation. Despite explicit reference to development and access to culturally appropriate mainstream MHSs in several policy documents, and the fact that acute specialist care for psychotic disorder is only available in mainstream MHS, there was a conspicuous lack of funding, implementation, and evaluation of mainstream MHS for Indigenous patients. Most of the policies were not evidence-based and often political responses to judicial or administrative reviews. Although tools have been designed for health
policy analysis [24] we found no published evidence for their application to Indigenous health policy. It may be argued that some policies are essentially statements of Indigenous values (e.g. S1.2) and therefore can be highly recommended guidance for any MHS development for Indigenous clients, especially that supporting EPI, without need for formal evaluation.

2. Mental Health Service Delivery Models

The literature concerning MHS delivery models for Indigenous communities was very difficult to obtain because little is published in the scientific literature and some unpublished documents had to be tracked down by personal contact with the program designer. Although we used time-consuming ‘saturation’ search methods, we cannot know whether we have missed important service models. Models for drug and alcohol services had to be selected from those deemed to be exemplary in field reports. None of the models identified and listed in Table 2 has been subjected to adequate quantitative evaluation, so our findings have to be viewed as preliminary.

Based on our assumption that best practice EPI service models necessitated direct involvement with mainstream services, we focused on mainstream service models. We found two primary care (Items 2.1.1 and 2.1.2), seven specialist mental health, (2.1.3-2.1.7) and one drug and alcohol, service models that were mainstream and targeted Indigenous patients. Of these ten mainstream models, one primary care, (ICHC), four mental health (RRMHS, MSOAP, FW-MHIP, and telepsychiatry), and the drug and alcohol program, Way Out Parks CHC, met criteria for a promising best practice service model for EPI delivery. The services that ranked highest in relevance to EPI were: the Inala Community Health Centre, a mainstream urban primary healthcare service (see Item 2.1.1); the South Australian Rural and
Remote MHS (RRMHS), a mainstream specialist MHS (see Item 2.1.3); and the Way Out Program, Parks Community Health Centre, a mainstream drug and alcohol service (see Item 2.5.2). These mainstream service-based programs had in common: 1) the use of an Indigenous sub-team to identify and engage Indigenous patients; 2) active involvement of the program in local Indigenous primary care settings and the general community; and 3) adoption of culturally safe practices. The Indigenous sub-team model appeared to be associated with high case detection and treatment retention rates, and improved community acceptability. The Indigenous sub-team model seemed most feasible in larger mainstream services based in urban or regional centres. The RRMHS appears to have succeeded in building a culturally acceptable pathway to specialist MHS care and therefore may be of relevance for delivering EPI to both urban and rural communities.

Two other programs (MSOAP and FW-MHIP) deemed promising best practice were adapted for delivery of specialist psychiatric services to rural and remote populations. Both of these programs increased Indigenous access to mental health services substantially. It is unknown what training or personnel enhancements would be needed to support best practice EPI. Although not formally evaluated, Indigenous acceptability and engagement seemed to be greater when mainstream specialist outreach consultation was conducted within ACHHS centres. Telepsychiatry programs embedded within mainstream MHSs appeared to be highly effective with Indigenous people, at least in the context of being a function of an Indigenous sub-team (see Item 2.1.7).

Two contrasting models for the role of the Indigenous Mental Health Worker (IMHW) were identified. One IMHW model is represented by either the Top End Division of General Practice (TEDGP) program (Item 2.1.2) or the Queensland deployment of IMHWs into
mainstream MHSs (Item 2.1.5), in which the IMHW has mainly a non-clinical role as cultural assistant to non-Indigenous clinicians and works in relative isolation from other IMHW. The contrasting team-based model is represented by the Fortitude Valley Mental Health Alcohol Tobacco and Other Drugs Service (MHATODS) (Item 2.1.6) program where the IMHW is fully involved in clinical intervention with both clinical and cultural supervision. Qualitative evaluation data supported the MHATODS model, compared to the non-clinical model.

In regards to non-mainstream MHS delivery, there does not appear to be sufficient research capacity to evaluate MHS delivery models in Aboriginal Community Controlled Health Services (ACCHS), which therefore remain untested. This research gap may be as much a loss to mainstream as Aboriginal mental health services, because the Social Health Team model (see Item 2.4) appears to represent an appropriate vehicle to support ACG-EP principles if it could be coupled with mainstream mental health services using best practice service coordination [25]. Best practice service coordination for Indigenous communities is possible (see Item 2.5.3, WuChopperen Health) but not always (see Item 2.2, RAISE and the CAMHC). With the exception of the Way Out Program the complete failure to quantitatively evaluate mainstream drug and alcohol for Indigenous clients cannot be accounted for.

3. Assessment Instruments

A comprehensive array of assessment instruments relevant to the evaluation of early psychosis programs appears to be available and to have had adequate evaluation in Indigenous populations (see Suppl. Table 3). Instruments for screening (K-10, PHQ-9, CIDI Psychosis Screen, Life Stressors), for psychiatric diagnosis (CIDI), for consumer measurement (HoNOS), for rating psychological attributes and SEWB (GEM, CFC, ACES, Positive Well-being; Angry Feelings), for youth assessment (SDQ, WASC-Y, Strong Souls,
Self-concept, Self-esteem), for family assessment (WAACHS Family Functioning Scale), and for drug and alcohol use assessment (AUDIT, CAGE, IRIS) have had significant use in Indigenous communities and are supported by limited (e.g. CIDI, AUDIT, WAACHS Family Functioning Scale) and on occasion adequate (e.g. INGP, K10, PHQ-9, SDQ, SS, IRIS) psychometric evaluation. We excluded assessments of cognitive (neuropsychological) function from our review because a recent publication covering these already exists [26]. The Australian Bureau of Statistics (ABS) Indigenous status question (Item S3.1) was deemed best practice identification.

Many reviews emphasised the need for cultural adaptation of assessments because of the possible lack of cultural equivalence of concepts pertaining to psychology and mental illness (e.g. [27-29]). Taking the results of our review as a whole, we found little evidence of conceptual non-equivalence in studies that assessed this with factor analytic (GEM; WASC-Y; SDQ Self-esteem, SS) or consultative approaches (K10, PHQ-9). Supporting evidence of similar conceptualisation of mental health across cultures [30] are findings of relative item equivalence (similar items can be used to tap the same health concept across cultures), which is reflected in the need for only minor wording changes to improve item understanding not conceptual content. Where adaptation of instrumentation for use with Indigenous populations appears to be most important is in relation to “operational” equivalence affecting questionnaire format, instructions, mode of administration and measurement methods [30]. That is, in the terminology of the Cultural Competency Workshop Report [28], these are purely “process issues” (e.g. interview technique, particularly the manner in which information is presented) which appear to be more important to successful cultural adaptation than “content” conceptual issues. Most evaluations refer to the need to adjust interview format, the need for Indigenous interviewers/facilitators, and clearer response option
presentation, (recommended ideally to be visual). In summary, there appears to be satisfactory instrumentation available for delivering and evaluating best practice EPI to Indigenous communities.

4. *Discrete Interventions*

Overall, the literature on the development and evaluation of culturally appropriate mental health interventions for Indigenous people is meagre (see Suppl. Table 4). Only two interventions directly relevant to the management of psychotic disorder have been reported (a medication management project, Item S4.4.1; and, the AIMhi NT Collaborative Care planning package, Item S4.4.2), and only one of these has been evaluated. No research was found dealing with basic issues such as whether Indigenous status affects antipsychotic pharmacokinetics, dosing, or susceptibility to side effects. Across the entire field of mental health and substance related disorders, only two evaluations of discrete intervention in Australian Indigenous samples that used an RCT design could be found [31, 32]. An RCT was attempted in a third but failed evaluation [33]. The most important elements of cultural adaptation appeared to relate to client engagement and mode of instruction rather than modification of intervention elements found efficacious in non-Indigenous groups.

In the review of discrete interventions, two incidental findings were made that have high relevance to EPI. Firstly, behavioural interventions for Indigenous young people required far greater focus on the family to be effective (e.g. Item S4.2.2), compared with non-Indigenous use. This is in line with evidence that families’ characteristics are some of the strongest determinants of academic performance in Indigenous high school students [34], play a central role in motivational counselling outcomes [35] and mental health generally [36]. Secondly, effective case detection may require the EPI team to network with Indigenous youth
organisations, which do not often exist. Creation of ‘safe places’ for Indigenous youth to go after hours, where health information can be provided, has been identified as a pressing need in regional towns with significant Indigenous populations [37].

5. *Resources supporting Indigenous mental health service delivery*

Suppl. Table 5 lists a sample of the most relevant resources for MHS delivery for Indigenous communities. The authors found a plethora of tools, web-based information, textbooks, protocols, service development tools, and psychoeducational tools for mental health promotion and substance misuse. Identifying these resources took persistent interactive Internet searching. Few are evaluated or described in the scientific literature. A limited number were directly relevant to the management of psychotic disorder. Only one was designed to assist mainstream health services to improve their Indigenous healthcare (see Item S5.5.1), and this resource has not been formally evaluated. Inspection of these resources, almost all developed with intensive Indigenous consultation, revealed little evidence of cross-cultural conceptual non-equivalence.
DISCUSSION

The purpose of this study, a component of the CPIN-EP project funded by the NHMRC, was to examine elements of best practice in MHS delivery that might be relevant to providing EPI to Australian Indigenous communities. The reader should note that the CPIN-EP co-authors, non-Indigenous researchers, came to this subject from the perspective of a broader research program evaluating the effectiveness of EPI in the Australian community in general. We are not experts in Indigenous mental health or service delivery for Indigenous communities. We commenced our evaluation with the assumption that any best practice service model for the management of psychotic disorder would have to involve mainstream specialist MHSs. As there is a dearth of literature about EPI for Indigenous people, a broad approach was taken to our examination of best practice. This examination encompassed much of the mental health and drug and alcohol fields. The methodological approach to assessing best practice was to look for points of convergence across items in the published and unpublished literature, especially in relation to service models, relevant to delivery of EPI.

The first observation of note was that the gap between Indigenous and non-Indigenous health extends to research on, and evaluation of, health service delivery. Finding documents was extremely slow because most of them were unpublished reports that were only identified by laborious searching of bibliographic, Internet, and Indigenous catalogue sources, or by word-of-mouth information incidentally gathered. That is, the bulk of the Indigenous mental health literature is not published in the peer-reviewed scientific literature, but as “grey” literature – technical reports and papers not controlled by commercial publishers (see Grey Literature Network Service: GreyNet). Fortunately, a significant proportion of the Indigenous grey literature is available on Indigenous websites. Much of this grey literature is of low scientific
quality, little of it reports quantitative interventional evaluation, and almost none reports mainstream MHS evaluation. As noted elsewhere [38], the dearth of electronically indexed documents accessible in library collections highlights the need for researchers to be exhaustive in their searches, as we aimed to be. To facilitate the access of other non-Indigenous academics to the Indigenous mental health grey literature that we worked so hard to find, we have included references to the key documents in an organised and tabulated format. Four of the Tables are available at as Supplementary Tables with a Supplementary Reference List. It appears that there is another gap that needs to be closed between what is acceptable research and evidential quality for non-Indigenous health service delivery versus Indigenous health service delivery.

From an evaluator’s point of view, our review of the policy context for Indigenous mental health was sobering (see Suppl. Table 1). Of the eleven key national policy frameworks identified that directly relate to Indigenous mental health, each linked to substantial government spending, few had any formal evaluation to determine their impact on the wellbeing of Indigenous Australians. Where evaluation was done, it was minimalistic, qualitative or merely assessing inputs and activities, not outcomes. Government has tended to commission private consultants to do evaluation and avoid academic institutions that might bring an element of scientific rigour to the evaluation. Rarely are quantifiable key outcome indicators specified a priori and processes to measure them integrated and funded as part of policy implementation. Of particular importance to EPI, although there was evidence of policy focus on the development of Indigenous functions within mainstream MHSs, implementation and evaluation was almost completely absent. It is suggested that evaluation of Indigenous health policy should be a priority given evidence of Indigenous policy failure in other areas [39].
Our survey of the literature on service models (see Table 2) revealed a broad range of programs targeting Indigenous people but again most were un-evaluated or inadequately evaluated. Based on either quantitative or qualitative data indicating high uptake by and high acceptability for Indigenous patients, three programs within mainstream services were identified as potentially relevant to delivery of EPI in Indigenous communities. These programs had comparable program models. One was embedded in a mainstream general practice (the Indigenous sub-team of the Inala Community Health Centre). Another was embedded in a mainstream MHS (the Indigenous Team, Rural and Remote MHS, South Australia); and the third was embedded in a mainstream drug and alcohol service (the Way Out Program, Drug and Alcohol Council, SA). These service models had three elements in common. First, the team-based Indigenous programs were separate but coordinated within a mainstream service. Second, these programs were strongly integrated into primary care and non-health Indigenous services. Thirdly, these programs had high visibility in and partnership with local Indigenous communities. In each program, the IMHW played a central and leading role in a multi-disciplinary team servicing specified local Indigenous communities. The effectiveness of the IMHW role within a mainstream health service, and the worker satisfaction with the role, appeared to be highly context-dependent being greater in team-based services where the IMHW had clinical responsibilities (e.g. Item 2.1.3, 2.1.6, 2.5.2, 2.5.3) than when working in relative isolation as a cultural assistant to non-Indigenous clinicians (e.g. 2.1.2, 2.1.5). Two specialist outreach programs were noted as having potential to deliver best practice EPI to remote communities if adequately enhanced and coordinated with mainstream specialist mental health services. We also found sufficient evidence to recommend the routine use of telepsychiatry as a model of mainstream service delivery for
Indigenous communities, but suggest this function be a component of an Indigenous sub-team.

We identified a wide range of assessment instruments (see Suppl. Table 3) that have been culturally adapted for use with Indigenous people and sufficiently evaluated to be used in relation to Indigenous EPI services (e.g. the CIDI, and its Psychosis Screen Items). A finding of general interest arising from the use of assessment tools adapted for Indigenous populations, is that contrary to insistence that the Indigenous concept of mental health is different to that of non-Indigenous people, studies using factor analysis of data collected in Indigenous populations using culturally adapted instruments have not detected evidence of significant cross-cultural conceptual differences. Evaluation of assessment tools developed for non-Indigenous populations in Indigenous settings suggest that adaptation needed for Indigenous populations is mainly restricted to issues pertaining to literacy, format, and interview processes, rather than the need to fundamentally change the meaning of items or scale constructs to adjust for cross-cultural differences. That is, cultural adaptation of an intervention or assessment [40] may be less critical than the cultural competence [41] of the service providers. Our search for resources to support mental health and drug and alcohol intervention yielded a wide range of tools and aids (see Suppl. Table 5). As well as a number of information sources we found helpful in writing this manuscript, including protocols and manuals, there are many interventional aids including ones relevant to psychotic disorder (e.g. the AIMhi resources, Item S5.6.1). Again, evaluation of resources is patchy although most seem to have been developed in a manner that cultural appropriateness can be assured, even if effectiveness cannot. Informal inspection of materials and resources for Indigenous settings did not provide evidence of an obvious across-cultural non-equivalence in health-related concepts. Taken together these findings suggest that there are no barriers to EPI for
Indigenous communities related to a lack of culturally appropriate instrumentation or tools to support clinical practice.

In regards to discrete clinical interventions (see Suppl. Table 4), we concluded that evaluation appeared to be especially inadequate in this area. Only three attempts to implement a randomised controlled trial of a specific mental health intervention for Australian Indigenous people could be found in the entire mental health and drug and alcohol literature. The first ever successful RCT of a mental health-related intervention evaluated the effectiveness of the Group Triple P Program adapted for Indigenous families [32]. This study appears to have received virtually no recognition from the field for being the trail-blazing accomplishment it represents, nor commentary about the extraordinary effort the researchers had to make (over a period of five years) simply to execute a relatively small sampled RCT in an Indigenous community. This and a previous failed RCT [33] well illustrate the barriers to carrying out interventional research in Indigenous settings, research that the current authors consider essential to improving MHS delivery to Indigenous people. That a third successful RCT has been reported in recent years (trialling the AIMhi Care Planning Package; [31]), and another nearing completion having achieved adequate subject recruitment [42], is somewhat encouraging. Successful cultural adaptation of mental health interventions did not appear to involve fundamental changes to factors related to efficacy in non-Indigenous samples, rather mode of engagement, material presentation, and relational style required adjustment (i.e. the service provider had to be culturally competent). These findings support the view that an intervention found efficacious in non-Indigenous groups does not necessarily need formal verification of efficacy using an RCT design in Indigenous samples. Rather, it may be sufficient to demonstrate that the culturally adapted version of the intervention engages and retains Indigenous clients, is considered culturally appropriate, is associated with a quantified
benefit of expected effect size using an observational study design, and meets the EQUATOR [23] or TREND [43] reporting guidelines, to establish intervention effectiveness in Indigenous settings.

We found alarming the small number of quantitative evaluations and the low quality of resulting evidence supporting interventions for Indigenous people. Whether Indigenous status affects the safety of antipsychotic drugs is completely unexamined. The impact of the dearth of behavioural intervention evaluation on knowledge development in the Indigenous mental health field generally, is starkly illustrated by the citations listed in a major resource textbook, *Handbook for Psychologists* [44]: most citations were not published in the peer-reviewed literature; and not a single published quantitative evaluation of a mental health intervention in Australian Indigenous people could be found in the reference lists. Taken together, the results of our review suggest that moving the Indigenous mental health field from being opinion-based to evidence-based still remains a formidable task for the future.

Our review of best practice MHSs for Indigenous people raised a number of general issues of importance. Why has so little MHS research and evaluation been done? Why is the evaluation done overwhelmingly qualitative, of low quality, and generally not published in peer-reviewed scientific journals? Why is there so little focus on mainstream MHSs? And, what role if any, can Indigenous and non-Indigenous academics play in improving MHS delivery through research? Based on our literature review we suggest that the answers to these questions lie in the much broader political arena and beliefs affecting Indigenous communities.
Brady (2004) proposed that the views of Indigenous political leaders have markedly affected community attitudes toward health service delivery and medical research [45]. Brady argues that Indigenous activists adopted the World Health Organisation (WHO)-led discourse on Indigenous affairs the politics of “cultural difference” and “self-determination” to successfully influence government policy to fund Aboriginal-controlled health and legal services, services which allegedly became highly politicised. Brady proposes that the politics of cultural difference promoted meanings and definitions of Indigenous health (mainly WHO-inspired) to construct identity difference. Assertions that Indigenous conceptualisations of health were “different from (and superior to) what [were] frequently designated as the ‘Western biomedical model’” have shaped debate about health definitions [45] (e.g. mental health versus social and emotional well being) without attempts to empirically test these definitions. Indigenous leadership’s portrayal of research as another form of cultural colonisation [46-50] needing the imposition of multiple complex ethics and community approval processes [51, 52] and community consultation that may take more than a year before research projects start [33, 53, 54]; and calls to reject standard peer review of Indigenous research funding applications [55, 56]; and promotion of low quality qualitative studies as the most culturally appropriate (“holistic”) research methodology in comparison to scientifically rigorous quantitative approaches that were characterised as (“reductionistic”) culturally inappropriate [57-60] have arguably arisen partly out of the politics of cultural difference. The politics of self-determination may have influenced Indigenous leadership demands for policy focus on ACCHs rather than mainstream MHSs. Whilst complaining about the cultural insensitivity of mainstream services ACCH leadership has not always been supportive of mainstream MHS research to change this [61].
A key question for EPI for Indigenous communities is what can be done to improve mainstream MHSs? The dearth of Indigenous health research published in the scientific literature (see [62]) means that there are no longitudinal studies specifically examining causal pathways to mental disorder or their prevention (see [63]) in Indigenous people and there is no level I evidence for behavioural interventions. Indeed, there is no published intervention research studies in Australian Indigenous health generally that meet the Cochrane Effectiveness Practice and Organisation of Care Group criteria of methodological rigour [64]. To the current authors, the situation looks like a racially-based denial of access to evidence-based psychiatric care. Moore (2008) argues that nothing will help this situation whilst Indigenous leaders maintain their deep attachment to the identity politics of “dichotomy, exceptionalism and victimhood”, which contributes to the “active and creative Aboriginal resistance” to policy measures [65]. Moore believes that identity politics emanating mainly from the urban middle-class Aboriginal elite mean that many Aboriginal individuals do not want to be “participatory citizens, commit to work or business, succeed in education or contribute to policy development”. Sarra has echoed parallel sentiments in the Indigenous education field [66]. Psychiatric academics or clinicians who want to help reduce mental health disparities need to be aware of these postulated influences in Indigenous politics. We suggest they should not support related calls for the lowering of standards for Indigenous research. Academics can insist on scientifically rigorous Indigenous research, but must play a positive role in building and supporting pathways to make this feasible, especially in fostering careers for Indigenous researchers. Clinicians working in mainstream MHSs can work to improve their individual and collective cultural competence in line with Ernest Hunter’s appeal to focus on modest change [67].
We could find no references to the community development literature in the Australian Indigenous mental health field, these frameworks potentially being alternatives to the entrenched needs-focused strategies currently used by government. Application of frameworks such as the Capability-Opportunity-Motivation framework [68] which takes into account all classes of contextual barriers to change and thereby enhances the likelihood of behavioural intervention effectiveness, seem particularly relevant to Indigenous mental health services. The adoption of approaches to community development based on those used internationally for physical diseases such as AIDS (see http://www.aidscompetence.org), malaria (see http://www.rollbackmalaria.org) and cardiovascular disease (see [69]); or those based on empowering asset-based community development (ABCD [70, 71]) models, might be particularly relevant to advancing Indigenous mental health research and service provision in Australia.

In summary, there appears to be a need for a softening of the strident promotion by Indigenous leadership of negative views about science as a “Western” (not global) form of “exploitation” (rather than a method for how we take fragmented knowledge and systematise it, whilst controlling for bias and confounding), and broader examination of non-experimental but quantitative study designs. Stepped wedge designs [72] might be particularly suited to evaluating the rollout of mental health service models for Indigenous people. Given the Indigenous people of Australia have had the technical competence to survive extremely harsh environments for millennia, scientific method might indeed be considered highly culturally appropriate in a less politicised atmosphere. The urgency for these changes was poignantly captured by a recent report that the Indigenous suicide rate of Queensland children younger than 15 years is almost ten times higher than in non-Indigenous young people [73].
In conclusion, in this review we found support for an Indigenous sub-team coordinated within mainstream MHSs delivering general mental health services to specified Indigenous communities, and which is tightly integrated into Indigenous primary care and other community-based social services, as representing a best practice service model for EPI provision for Indigenous people especially in services with large catchment populations. Medical specialist outreach assistance programs and telepsychiatry were considered best practice in relation to rural and remote Indigenous communities, and with enhancements, may be highly relevant to EPI. Our review also found an unacceptable paucity of quantitative studies into the effectiveness of service models and clinical interventions for Indigenous people, especially as they relate to mainstream MHSs. We suggest that the formidable task of moving the Indigenous mental health field towards being evidence-based still lies ahead, and that this task is unlikely to be achieved without attitudinal changes on the part of both non-Indigenous health professionals and Indigenous academic and political leadership.
REFERENCES


104. KPMG Consulting for the Office for Aboriginal and Torres Strait Islander Health. The Aboriginal and Torres Strait Islander Coordinated Care Trials: National Evaluation Summary. Canberra: Department of Health and Aged Care, 2001.


Table 2: Mental health service delivery models

2.1 MAINSTREAM SERVICE MODELS

2.1.1 Indigenous sub-team embedded in a mainstream urban primary healthcare centre

Inala Urban Community Health Centre (ICH)

**Description:** Situated in south-western Brisbane where 8% of the total Inala population is indigenous. A Queensland government-funded service providing comprehensive primary care with access to allied health and specialist health teams operating under one roof. In 1995, an Indigenous sub-team within the ICHC, the Inala Indigenous Health Service was started including an Aboriginal doctor and nurse, and receptionist. Other strategies included indigenous art and radio in the waiting room, non-indigenous staff cultural awareness training, promotion to local indigenous community groups, interagency collaboration and liaison with regional ACCHS and through an ATSI interagency network meeting.

**Evaluation:** Numbers of new indigenous patient consultations grew 10-fold in about 10 years (from less than 1,000 in 1995-96) [74]. Energetic Indigenous leadership within ICHC and community consultation and participation of local Inala Elders was considered essential to the success of the IIHS. Rates of new diagnosis of depression, hazardous use of alcohol, and mental referral, increased using a modified version of the Medicare adult health check form [75].

2.1.2 IMHW operating in remote mainstream primary healthcare centres

The Top End Division of General Practice (TEDGP)

**Description:** TEDGP managed a partnership between the Top End Mental Health Service (TEMHS), The Northern Territory (NT) Department of Health and Community Service (DHCS), the Bachelor Institute for Indigenous Tertiary Education, and remote municipal councils (with majorities of Indigenous Councillors) to recruit eight IMHWs to work under the direct support and guidance of GPs (mainly non-Indigenous) in remote DHCS-owned health centres [76]. IMHWs received day-to-day clinical supervision from GPs, but were employed by local municipal councils. Although there was no formal IMHW job description, IMHW duties included counselling (e.g. crisis, substance use, marital), responding to behavioural emergencies (e.g. suicide attempts or threatened violence), and assisting and advocating with basic welfare, accommodation, court liaison, hospital transfers, and community education (e.g. domestic violence, alcohol abuse). IMHW directly supported GP roles in explaining cultural or relationship matters, managing difficult patients and providing cultural awareness.

**Evaluation:** The Charles Darwin University-led independent process evaluation found that the clinical role of IMHWs was grossly under-developed [77]. File audit revealed that IMHWs were little involved in clinical mental health practice and infrequently made file entries directly; few or no patients had mental health care plans, and case conferences were rare. IMHWs were mainly employed to monitor patient compliance with medication; little training or supervision of IMHW was evident. No impact/outcomes evaluation was done.

2.1.3 Indigenous sub-team embedded in a mainstream mental health service

The Indigenous Team, Rural and Remote Mental Health Service (RRMHS), South Australia (now merged with Country Health, SA)

**Description:** The Indigenous Team, a sub-team embedded in the RRMHS, uses a primary care-led distance consultation-liaison (C-L) service model to facilitate integration of remote primary care services and metropolitan mainstream acute (hospital-based) specialist mental health care [5]. Key elements of the RRMHS Indigenous Team’s specialist outreach are, a 24-hour emergency triage telephone service with specialist backup accessible by consumers and health professionals, and dedicated access to acute inpatient beds in Adelaide. Cultural competence is supported by: field trips for mainstream MHS Staff to remote indigenous communities; a staff exchange program between remote clinics and hospital-based staff in Adelaide; and use of traditional healers (Ngankari). The Indigenous Team includes full-time psychiatrists, a registrar, and IMHW staff trained on comprehensive clinical protocols (available on request from K Fielke, see [5]).

Mainstream
staff maintain high visibility at remote sites with regular outreach visits, engagement of indigenous community leaders, and partnership with ACCHSs and the Royal Flying Doctor Service (RFDS). Telespsychiatry (realtime video-conferencing) is used. 

**Evaluation:** A qualitative process evaluation was consistent with the RRMHS Indigenous Team having the capability to support the ACG-EP, and being deemed a highly culturally appropriate service [5] with reasonable acceptability [78]. Despite no formal quantitative evaluation, by comparing an evaluation of the RRMHS completed in 2000 [79] prior to the introduction of the Indigenous team with three evaluation reports post-introduction of the Indigenous team [5, 78, 80], it can be deduced that engagement of Indigenous patients increased from virtually nil in 2000 (p 190 in [79]) to substantial numbers (e.g. 14% of inpatients were Indigenous in 2009 [5], and telespsychiatry assessments of Indigenous patients had increased to in excess of 100 per annum by 2009 [80]. Sustainability and growth of the Indigenous Team is suggested by a 2-3 fold increase in staffing by 2010 (personal communication, K Fielke 14 March 2010).

### 2.1.4 Specialist Outreach (consultation-liaison) model within a mainstream setting not serving Indigenous communities exclusively (Rural and Remote)

**The Medical Specialist Outreach Assistance Program (MSOAP)**

**Description:** MSOAP is a Commonwealth-funded program to increase access to medical specialists for people living in rural and remote areas, especially with significant indigenous populations. It covers the out-of-pocket expenses of patient and specialist involved in access to consultation. Fund holders are typically consortia of mainstream GPs. Specialists usually fly into a remote centre every month or so, consult in on cases and train local clinicians to manage cases between visits. An Indigenous program (ISOAP) was developed specifically for ACCHs. MSOAP has been recently expanded to support multidisciplinary outreach teams for Indigenous Chronic Disease (MSOAP –ICD) [http://www.health.gov.au/internet/main/publishing.nsf/content/ruralhealth-services-msoap].

**Evaluation:** MSOAP covers all medical specialities, and process evaluation has shown substantial increases in access to specialist care [81] for rural and remote populations, including Indigenous communities. In a series of papers, Cord-Udy describes the impact of MSOAP on delivery of psychiatric services to remote SA communities, both non-Indigenous and Indigenous [82-84]. In this context, MSOAP had a major impact on the volume of psychiatric services delivered to Indigenous Communities and how these services could be made culturally appropriate when delivered within an ACCHS centre. The limitation of MSOAP initiative in SA is that it was a consultation-liaison model with limited utility in complex cases and where need for ongoing care was required, a frequent situation with Indigenous patients. Evaluations of ISOAP and MSOAP-ICD are yet to be reported.

### The Far West Mental Health Integration Project (FW-MHIP)

**Description:** FW-MHIP was an Area Health Service-administered project resourced with additional Commonwealth funding. Visiting private practice psychiatrists augmented the local community mental health service team which accepted referrals from local GPs and ACCHSs in the far west of NSW (including the towns of Broken Hill, Bourke, Lightning Ridge, Dareton) [85, 86], where 13% of the population is Aboriginal. Visiting psychiatrists were intended to integrate private GPs and the public area mental health service (AMHS), their primary role being consultation and assessments of patients referred by GPs. Mostly, visiting psychiatric clinics were co-located with the AMHS Mental Health Teams, though in at least one instance, the visiting psychiatrist consulted from a ACCHS centre. This was not an Indigenous-specific program, rather for all rural and remote patients.

**Evaluation:** Visiting psychiatrists saw a many-fold increase in the number of new referrals (about 50% of all new cases seen, the total of which was around 140 per year) who had a wide range of disorders but more than 25% with a psychotic disorder [86]. Of particular interest were the rates of new referrals of Aboriginal patients, which were as high as 24% to 44% of the total number of new patients seen, depending on which subregion in the AMHS [87]. Examination of Aboriginal characteristics (e.g. age or sex) or whether high rates were related to a positive relationship between the AMHS and ACCHS, and whether the visiting psychiatrist consulted from the ACCHS centre itself, was not possible because of the extreme difficulties in obtaining ethics approval from the Aboriginal and Medical Research Council to research Aboriginal patients specifically (personal communication, D Perkins, 1/08/2012). Surveyed GPs did not rate the impact of MHIP very
highly [85].

<table>
<thead>
<tr>
<th>Outreach allied health services for remote north-west Queensland</th>
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<tr>
<td><strong>Description:</strong> The North Queensland Rural Division of General Practice (NQRDGP) conducted a 4-stage service development project to describe a hub-and-spoke model of allied health teams based in a regional health service centre (in Mount Isa) visiting remote communities on a 6-week rotation for 2-3 days/community. Gap mapping indicated a specific need for psychologists to address mental health problems, especially in children, and alcohol and substance abuse in indigenous communities [88].</td>
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<td><strong>Evaluation:</strong> The NQRDGP model was never implemented or evaluated in vivo. In 2006 the Commonwealth-funded allied and nursing mental health services for rural remote communities as part of the Better Outcomes in Mental Health Care (BOiMHC) program. A preliminary evaluation of BOiMHC suggested that the increased resources resulted in increased referrals of never-treated rural (not remote) patients (3% aboriginal) who showed improvement in K10 scores post-intervention [89].</td>
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<tr>
<th>2.1.5 IMHW in mainstream mental health services working in consultation-liaison roles</th>
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<tr>
<td><strong>Queensland Health Program</strong></td>
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<td><strong>Description:</strong> The Queensland Mental Health Policy Statement: Aboriginal and Torres Strait Islander People (1996) emphasised the employment and professional and vocational development of Indigenous staff in specialist mental health services to provide services to Indigenous people with mental illness, in recognition of the under-representation of Indigenous personnel in the public mental health system especially at professional levels. The Policy supported specific local service staffing ratios according to needs-based criteria. Certificate and diploma level courses were to be established for IMHW. This 1996 Policy was supplemented by the Queensland Health Indigenous Workforce Management Strategy: Our Jobs Our Health Our Future (1999), which was developed to assist District Directorates to enhance workforce capacity to improve Indigenous health status. It emphasised improved recruitment, retention and development of Indigenous employees, and creation of culturally safer work environments where Indigenous workers can expect ‘shared respect, shared meaning, shared knowledge and experience, of learning together with dignity and true listening’.</td>
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<td><strong>Evaluation:</strong> The present authors could not identify a formal evaluation of these Policy Statements. To this day, Indigenous staff at professional levels are grossly under-represented. In a Focus Group, IMHWs expressed the unanimous opinion that at least until 2005, the IMHW role as deployed in Queensland mainstream metropolitan services, was usually carried out in relative isolation from other IMHWs, allegedly attracted racist behaviour from non-Indigenous personnel, and was restricted to non-clinical liaison and welfare services [90].</td>
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### 2.1.6 IMHW operating in a youth detention facility

**The Mental Health Alcohol Tobacco and Other Drugs Service (MHATODS) Fortitude Valley, Queensland.**

*Description:* With advice from the Senior Indigenous Project Officer (SIPO), MHATODS developed the IMHW job description, recruited for the position, and established guidelines for the non-clinical activities of the IMHW role that might facilitate engagement of Indigenous youth with mental health and substance use disorders [91]. The primary function of the IMHW was to promote referrals of Indigenous youth in detention to MHATODS, engage and retain them in treatment, and provide cultural insight into appropriate approaches to mental health problems. The IMHW was involved in formal clinical intervention jointly with a MHATODS clinician. The IMHW received clinical supervision from a senior allied health professional and regular cultural supervision from the SIPO. Training was initially informal and subsequently via an advanced diploma to primary health studies or equivalent.

*Evaluation:* The development of the role of the IMHW evolved over a number of years during which time the percentage of Indigenous young people in detention referred to MHATODS steadily increased, reflected in the percentage of total episodes of service to Indigenous youth rising from 26% in 2001-02 to 41% in 2003-04 and to 50% in 2005-06 [91].

### 2.1.7 Telepsychiatry programs embedded within mainstream MHSs.

*Description:* Telepsychiatry is the use of information and communication technology to provide psychiatric services from a distance [92] and refers to a network of sites that deliver or receive psychiatric services using video conferencing [93].

*Evaluation:* In general, telepsychiatry in Australia has been found to be: reliable for diagnostic assessment and treatment recommendations [94]; associated with high levels of patient and referrer satisfaction and acceptability [95, 96]; cost-effective [97]; and applicable to young people [93, 98]. However, rates of telepsychiatry services to Australian Indigenous people appear to be low (7%) apart from one service, [93] the RRMHS (see item 2.1.3). Most of the telepsychiatry consultations done for Australian Indigenous people were carried out in the context of the RRMHS Indigenous Team [80] highlighting the value of this service model.

### 2.2 PARTNERSHIP MODELS (ACCH-Mainstream MHS)

**The Regional Aboriginal Integrated Social and Emotional (RAISE) Wellbeing Program, Port Augusta, SA**

*Description:* RAISE was a two-year service research project (February 2003 to May 2005) initiated by the DOHA-funded Australian Primary Care Research Institute (APHCRI) aimed to improve primary mental health care services to Aboriginal people through service partnerships between the Pika Wiya ACCHS, the mainstream community mental health team the mainstream mental health liaison service, and an ‘outback’ community counselling service [99]. With an annual budget of $160,000, a project officer, a regional SEWB program manager, and a part-time IMHW were employed. The project was administered by the area health service, had oversight from the CEOs of the area health service and the ACCHS, and the support of service managers whose job was to implement the program business plan.

*Evaluation:* A case study, based on interviews and workshop feedback from service providers and managers, and policy officers, reported a qualitative evaluation [99, 100]. Sustainability was apparently low because of insufficient ‘collective efficacy’ (extent to which partners collectively agree on the legitimacy of program goals) resulting in slow or failed development of inter-service memoranda of understanding, common clinical assessment and care management tools and conjoint training, role definitions, and processes of communication (e.g. regular case reviews and inter-agency staff meetings) and generation of data about program effectiveness for use in lobbying for continued program support. That is, the ‘integrity’ of the model was questioned.
The Coordinated Aboriginal Mental Health Care (CAMHC) Project, Port Lincoln, SA

**Description:** The CAMHC (2004 - ) project aimed to better coordinate systems of care for Aboriginal people with mental disorders living in the Eyre Peninsula region, SA, by developing culturally appropriate pathways and protocols of care embedded in collaborative and integrated systems between ACCS’s and mainstream services [101]. Service development was guided by problems and solutions analysis based on formal interviews with managers and service providers for ACCHSs, rural and remote mainstream mental health services, mainstream drug and alcohol services, police, correction, housing RFDS, ambulance, the Division of GPs, and support groups. In principle, coordination can overcome the complexity of existing multi-layered service or funding provider systems, draw together fragmented services, [102] and increase quality of services.

**Evaluation:** No formal evaluation has occurred so far. Kowanko et al (2009) reported that although “the project is progressing slowly... the pace [being] set by our Aboriginal partner organisations... [with]... other high priorities and many challenges... [including] reluctance of various local and centralised organisations and groups to work together” nevertheless “interventions are ongoing and have led to sustained benefits” [101]. If the processes of the CAMHC Project are compared to best practices for service delivery coordination in Indigenous communities [25] the most likely flaw with the CAMHC Project was the lack of commitment to a common cause.

2.3 CONJOINT MANAGEMENT MODELS (ACCHS-Mainstream Health Service)

**Aboriginal Coordinated Care Trials (CCT) at Katherine West, the Tiwi Islands, NT, Wicannia, NSW, and Pert/Bunbury, WA**

**Description:** The Round One 2-year CCTs were designed to assess (1) the benefits of flexible funding models, where a single local funds-holder ‘integrated’ (pooled) Commonwealth-States and Territories contributions for flexible allocation to either individual patient care or population-based interventions, and (2) the value of coordinated care (multidisciplinary primary care supervised by the GP with the assistance of a care coordinator, clinical assessment and care-management protocols, and routine outcome measurement) for patients requiring a mix of health care services over an extended period. Against prediction, non-Indigenous CCTs found that better coordination of individual patient care did not reduce hospitalisation, demonstrated using either RCT or geographically controlled study designs. Indigenous Round One CCTs (1997-1999) were not required to evaluate patient outcomes or apply rigorous methodology, but simply asked to assess whether ‘integrated’ locally funded and managed service models increased capacity to offer access to cultural appropriate care and improve ‘patient and community empowerment’ [103].

**Evaluation:** The Round One indigenous CCT showed that increased funding enabled ACCHS to purchase more services (hire staff) and thereby enrol more patients and write more care plans [104]. Few care plans were written for mental disorders. Little follow-up quantitative data was collected beyond initial assessments and impact data for collaborative care for any type of indigenous patient was not collected or reported.

2.4 ACCHS PRIMARY CARE MODELS FOR MHS DELIVERY

**Social Health Teams**

**Description:** Social Health Teams (SHT) (see p 28 in [105]) model is a “broad based approach... incorporated into primary care systems... consisting of a number of SEWB workers and mental health professional, work[ing] in collaboration with primary health care providers, mainstream MHSs as well as across sectors (housing, education and welfare)... to provide holistic health care” [106]. The Teams provide a range of skills including community and cultural expertise, family support, mental health, and substance misuse and can provide access to mainstream mental health specialists through existing outreach or partnership arrangements ([106] p30).

**Evaluation:** No effectiveness evaluation of the SHT model has been reported. There was anecdotal evidence that SEWB approaches operating in ACCHSs
increased polarisation of SHT models in ACCHS and the clinical models in mainstream MHS [107]. The WuChopperen Health Service (see below 2.5.3) is deemed to be an example of the Social Health Team model [108]. Supporting the utility of this model is its capability to subspecialise, for example, to address the needs of deaf Indigenous people [109]. In theory, the Social Health Team model would seem to represent many of the ACG-EP guideline principles, and the model coordinated with mainstream MHSs merits formal evaluation in partnership with ACCHSs that are seeking research input (e.g. WuChopperen [108]).

Bringing Them Home (BTH) Counsellors

**Description:** The BTH Counsellor role can be held by an Indigenous person with “appropriate qualifications” (usually not a tertiary qualification) to carry out “culturally appropriate counselling for the relief of trauma and psychological problems of individuals and families affected by forced family removal” [110]. Apparently an unspecified “mainstream clinical counselling model” was used by BTH Counsellors who were intended to receive professional supervision from a qualified health professional. In addition Counsellors offered group activities (e.g. barbecues and fishing trips), informal drop-in services, and promotions of contact with ‘Stolen Generation’ organisations. No job descriptions or practice guidelines were published.

**Evaluation:** BTH Counsellors failed to attract many of the primary target group, first generation BTH clients, but made a large number of general SEWB client contacts. Limited informal client feedback suggested high level of satisfaction. Impact/outcome processes have not been evaluated [110].

2.5 MODELS FOR DRUG AND ALCOHOL SERVICE DELIVERY

2.5.1 Mainstream drug and alcohol services (without targeted Indigenous programs)

**Description:** No publications describing standard mainstream models of drug and alcohol services approaches to Indigenous-specific best practice models were identified.

**Evaluation:** No formal evaluation has occurred. In a national survey of workers in mainstream drug and alcohol treatment services, Roche et al (2009) found that 64% of respondents believed that the needs of Indigenous clients were not adequately met [111]. The majority of mainstream drug and alcohol services report that they have little access to resources designed specifically for Indigenous Australians [111]. Roche et al concluded that initiatives are required to improve mainstream services for Indigenous clients in a culturally sensitive and appropriate manner.

2.5.2 An Indigenous Team embedded in mainstream drug and alcohol services

The ‘Way Out’ Program, Parks Community Health Centre (CHC), Adelaide, SA.

**Description:** The Parks CHC is a South Australian (SA) government-funded mainstream multidisciplinary general health service located in the north-western suburbs of Adelaide with more than 30 staff that targets socioeconomically disadvantaged groups with barriers to health care access: those with Indigenous or CALD background and young people. Based on a survey of Indigenous injecting drug users [112] that showed low acceptability of both mainstream D&A services (culturally inappropriate) and ACCH services (confidentiality, and shame and stigma concerns), the Parks CHC in conjunction with the Drug and Alcohol Services SA (the mainstream public D&A services) and the Nukuwarrin Yunti Aboriginal Health Service (the ACCHS based in the centre of Adelaide) in 1999 commenced the Indigenous-specific ‘Way Out’ Program [113] offering Indigenous people multifaceted interventions including opioid substitution (with methadone or buprenorphine). The Program held ‘Healing Days’ for Indigenous families affected by heroine abuse, and consulted with Indigenous community leaders to inform them about the role of methadone maintenance. As well the Parks CHC held weekly Indigenous ‘open clinics’ with a free community lunch. The employment of an Indigenous D&A counsellor position with strong links to Nunkuwarrin Yunti, the local community, and Indigenous drug users supported close linkage of the Program with the Aboriginal Kinship Program which provided community-based activity programs that complemented the ‘Way Out’ Program’s pharmacological treatments, counselling and brokerage assistance, and family support through case management [113].
**Evaluation:** Qualitative feedback suggested that clients liked the Indigenous-specific service, and that the Community’s entrenched opposition to harm minimisation D&A strategies (e.g. methadone maintenance) in favour of abstinence programs (e.g. residential rehabilitation) had softened as they observed heroin users successfully improved their social function. Quantitative data showed increasing numbers of Indigenous clients attending the ‘Way Out’ Program and stabilised on methadone, starting with 5 clients in 1999, and rising to 90 in 2005 [113].

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<tr>
<th>2.5.3 Non-residential ACCHS comprehensive primary healthcare services for drug and alcohol service delivery</th>
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<tr>
<td><strong>The WuChopperen Health Service Ltd. Tobacco, Alcohol and Other Substance (TAOS) Program, Cairns Queensland.</strong></td>
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<td><strong>Description:</strong> The TAOS program is embedded in the Social Health Service (mainly providing psychological services) which together with the Clinical Services Unit (providing comprehensive medical and oral health service) forms the WuChopperen ACCHS. Both divisions are organised into multidisciplinary subspecialty teams, 80% staffed by Indigenous health workers. With a small staff base, the TAOS Program offers brief substance misuse interventions, home-based detoxification, group relapse-prevention work, and forward placement in residential treatment programs [114]. Integrated case management is offered by the Social Health Team.</td>
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<td><strong>Evaluation:</strong> Using case study methodology, the TAOS Program was one of five drug and alcohol projects selected from a field of 177 services nationally as representing key elements of best practice in team-based non-residential care [114]. An exemplary feature of the WuChopernen model was considered to be its capability to partner a range of service providers and NGO agencies to deliver multiple services under a highly coordinated framework [25, 108].</td>
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<th>2.5.4 Indigenous specific inpatient detoxification services</th>
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<td><strong>Description:</strong> No published descriptions were found.</td>
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<td><strong>Evaluation:</strong> Not applicable.</td>
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<tr>
<th>2.5.5 Residential ACCHS drug and alcohol programs</th>
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<tr>
<td><strong>Miliya Rumurra Alcohol and Drug Rehabilitation Centre, Broome, NT</strong></td>
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<td><strong>Description:</strong> Miliya Rumurra, a residential facility a few kilometres from town with mainly Indigenous staff focuses on Indigenous people with alcohol abuse [114]. Clients are accepted after detoxification at the local hospital, along with immediate family. The three month program includes: one-to-one SEWB and family counselling; social skills, anger management, and health education groups; the Alcoholics Anonymous (AA) program; and recreational activities (hunting, fishing, bush trips). It has moved from an AA abstinence-based model to include harm minimisation approaches. The residential program is linked to a sobering-up shelter and community outreach.</td>
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<td><strong>Evaluation:</strong> Using case study methodology, Miliya Rumurra was ranked second as exemplifying outstanding practice in a residential program [114]. The program was judged to have good governance, commitment to Indigenous health, a flexible but holistic approach, strong intersectorial collaboration, and outreach capacity. Routine evaluation procedures were noted as ineffective. Previous reports about the effectiveness of residential drug and alcohol programs targeting Indigenous people have noted an absence of methodologically sound evaluation, and the little data available suggests that they have little or no effect at follow-up on substance abuse [45, 114, 115]. Evidence of ineffectiveness of residential programs has not altered government policy of directing most funding in support of these programs and little toward evidence-based non-residential services. Cited July 2010; available from URL: <a href="http://www.aihw.gov.au/indigenous/health/aodt_services.cfm">http://www.aihw.gov.au/indigenous/health/aodt_services.cfm</a></td>
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Supplementary Table 1: Australian national Indigenous policy relevant to mental health service delivery

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<th>NATIONAL POLICIES</th>
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<td><strong>Description:</strong> Framework for whole-of-government approaches to improving indigenous health and healthcare [1]. Key Result Areas 2 and 4 include support for improved access to culturally appropriate and responsive mainstream mental health services, early intervention for chronic diseases, and intervention effectiveness evaluation. The NSFATSIH was intended to complement the National Aboriginal Health Strategy (1989) document. <strong>Evaluation:</strong> In the 2007/2008 Report [2] on progress against the NSFATSIH 2007-2013 Implementation Plan [3] no completed initiatives concerned improved access and responsiveness of mainstream mental health services.</td>
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<td><strong>Description:</strong> Guiding principles in policy construction and service delivery for utilisation by all jurisdictions, supporting culturally safe responsive mainstream health services. States and Territories drafted separate Implementation Plans [4]. <strong>Evaluation:</strong> No evaluations of the Framework or Implementation Plans have been carried out to date. A NSW-based evaluation of health staff cultural awareness training, an element of the Cultural Respect Framework, indicated gross deficiencies [5].</td>
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<td><strong>Description:</strong> The Report [6, 7] introduced into policy the holistic concept of Social and Emotional Wellbeing (SEWB) which included a focus on cultural and social determinants of mental health in addition to mental disorders. In response to the Report, an Action Plan (1996-2000) (see p78-85 [8]) supported a youth suicide initiative (<em>Here for Life</em>); trauma and grief counselling in primary care; development of culturally appropriate mainstream mental healthcare models; and Regional Centres in mental health training, service delivery, and evaluation. <strong>Evaluation:</strong> The 2001 Action Plan evaluation was limited to program self-report and an attempt to identify promising developments [8]. One outcome was the drafting of policies/strategies by States and Territories governments. A number of projects aimed at increasing accessibility to mainstream MHSs were described [8]. These involved MHS-ACCHS partnerships e.g. five Koori-designated beds within the psychiatric unit at St Vincent’s Hospital, Melbourne, with allocated access managed by the Victorian Aboriginal Health Service (p45 [8]); an acute residential care facility for young people, a ‘community house’, established by North West MHS, WA Health as an alternative to evacuation to Perth (p65 [8]); the Pathways Project in Warrnambool which linked the mainstream MHS and community-based services (p48 [8]). No formal evaluation was carried out on any of the Action Plan projects [8].</td>
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<td><strong>S.1.4 Bringing them home: Commonwealth initiatives (Sen. John Herron, Press Release, 16 December 1997)</strong> (parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=(ld:media/pressrel/slo30);rec=0, accessed 28 September 2011)</td>
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| **Description:** This statement was the Australian Government’s response to the *Bringing Them Home (BTH)* Report of the National Enquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families, Human Rights and Equal Opportunity Commission, Sydney 1997. A $63 million 4-year package of ‘practical assistance’ including development of family support and parenting programs, a national network of Link-Up services, the employment of new BTH counsellors in ACCHSs, and the expansion of Regional Centres for SEWB staff training and support. **Evaluation:** In 2003 an evaluation based mainly on anecdotal self-report by program staff suggested culturally appropriate services were being offered by BTH grief and trauma counsellors placed in ACCHS, but their impact was not assessed [9]. After BTH funding was extended another evaluation [10] was reported in 2007 based on field work (including interviews with 40 Link-Up and 49 BTH counsellor clients) and 33 key informal telephone interviews. Between 1998-2006...
more than 1376 reunions were supported by Link-Up counsellors. Few ‘first generation’ BTH clients were seen either for Link-Up family reunions or grief and trauma counselling, clients being mainly descendants of those directly removed or non-BTH clients. BTH counsellors carried out a large number of SEWB client contacts (30,000-40,000 per annum). The number of SEWB clients seen was not reported and apparently unknown. Anecdotal client feedback suggested high levels of client satisfaction. Impacts/outcomes were not assessed. (www.health.gov.au/internet/publications/publishing.nsf/Content/bringing-them-home, Accessed 7 October 2011)


Description: The Framework [11] was based on 9 principles enunciated in the Ways Forward Report and had five strategic directions: 1) intersectorial action to enhance SEWB and lower risk by using a holistic approach targeting families, healthcare delivery, and responding to grief, loss, trauma and anger, 2) build workforce capacity to deliver SEWB care in ACCHS’s, 3) act to enhance responsiveness and access to mainstream mental health care, 4) coordinate, plan and resource service delivery, and 5) build the evidence base to ensure interventions are targeted and effective by improving quality, data and research. Each jurisdiction was required to include a SEWB component to their NSFATSIH Implementation Plan.

Evaluation: No evaluation reports at national or States and Territories level could be found. Supporting the conclusion that the strategy was unsuccessful was evidence that one of the strongest predictors of ‘discharged [from hospital] against medical advice’ (an indicator of low service responsiveness) was a diagnosis of mental disorder. ATSI mental health patients being about four times more likely than non-indigenous patients to be discharged against medical advice in 2004-2006. [www.aihw.gov.au, 2008 National Hospital Morbidity Database]


Description: ATSIPCAP [12] was written to complement the National Drug Strategy – Australia’s Integrated Framework 2004-2009, which applied to Australians generally but did not have an indigenous focus. The ATSIPCAP had six key Result Areas, 1) enhanced capacity, 2) whole-of-government effort and commitment, 3) substantially improved access, 4) holistic approaches, 5) workforce initiatives, and 6) sustainable partnerships.

Evaluation: The Evaluation and Monitoring of the National Strategy 2004-2009 (vol 1 and 2) Final Report [13, 14] excluded an evaluation of the ATSIPCAP, proposed to be separately evaluated. In 2009 the ATSIPCAP evaluation was completed by a professional consultancy [15]. This qualitative evaluation based on a survey of stakeholder opinion found that the ATSIPCAP had little impact because few in the field were aware of it and there was a lack of accountability. The 54 programs funded in conjunction with ATSIPCAP could not be evaluated because data was not collected to allow this.


Description: The Action Plan 2000 [16] was a joint Commonwealth, States and Territories initiative under the Second National Mental Health Plan and contained strategies to promote mental health to reduce mental health problems through enhancing protective factors and reducing risk factors for mental disorders, and to intervene as early as possible to minimise the impact of mental disorders. Young people (18-25 years) were described as a priority group for whom the listed national actions included development of models of early (psychosis) intervention and strategies to encourage their implementation. People of ATSI background are also described as a priority group. Key listed actions included the development and evaluation of culturally appropriate interventions within mainstream and specialised services, and better linkage between mainstream and ACCHS/s for early disease recognition and more effective treatment. Effectiveness evaluation was identified as an urgent need.
There has been very limited evaluation of suicide prevention strategies in general, and of Indigenous programs in particular, and little evidence to support their effectiveness has been reported [21, 23]. Strategies have mainly focused on building resilience and mental health literacy about suicide, where there is little evidential support in the general population [22]. Two of the most effective suicide prevention measures, physician education and restriction of lethal means [22], have not been applied in Indigenous programs [21]. Strategies that increase follow-up and support of young people who have presented following a suicide attempt, or strategies to increase antidepressant medication treatment rates for depressive disorder, have not been evaluated in the Indigenous context despite there being ‘persuasive’ data in support of their effectiveness in non-Indigenous communities [24]. One out of the five components of the Suicide Prevention in Country SA initiative (SPICA) did include an evidence-based strategy, namely education of service staff about suicide [25] but the evaluation report was apparently never published.


**Description:** NIRA is an overarching set of principles or frameworks for carrying out the tasks of reducing Indigenous disadvantage linked to six National Partnership Agreements (NPAs) with targets underwritten by a total of COAG funding of $4.6 billion over about five years.

**Evaluation:** Performance indicators for NIRA/NPAs have been selected, including five related directly to mental health (e.g. proportion of people with a mental illness with a GP care plan), however the Prime Ministers’ Report 2010 did not make reference to the mental health indicators. The RANZCP has called for improved MHS for Indigenous Australians (RANZCP, 23/3/11, www.ranzcp.org/latest-news/indigenous-mental-health-services-needed.html. Accessed 31 July 2011) but we note that the RANZCP is not represented on any of the major NIRA committees, in contrast to representation by psychologists.


**Description:** The key aims of the WSF in relation to the ATSI health workforce were to increase its size; clarify its roles, regulation and recognition; and improve the effectiveness of training, recruitment and retention measures [17]. The role of the ATSI/Aboriginal/Indigenous Mental Health Worker (herein IMHW) is poorly defined in policy and can refer to an Indigenous person employed in healthcare with a wide range of qualifications and experience, working under markedly different circumstances for services that have poorly defined expectations [18].

**Evaluation:** To date there has been no published effectiveness evaluation of the WSF (ATSI Health Workforce Working Group Annual Report 2002-2004, AHMAC, Canberra 2004). Although the role of the IMHW under ideal circumstances has been described (e.g. www.ranzcp.org/images/stories/ranzcp-attachments/Resources/College_Statements/Position_Statements/ps50.pdf, Accessed October 2011), generally the reality appears to fall far short [19].

S1.10 National Suicide Prevention Strategy

**Description:** Most of the Indigenous-focused programs funded under Australia’s National Suicide Prevention Strategy [20] have aimed at promoting SEWB/resilience among young people or involved media campaigns to increase awareness and mental health literacy of Indigenous communities [21], neither approach apparently being evidence-based [22].

**Evaluation:** There has been very limited evaluation of suicide prevention strategies in general, and of Indigenous programs in particular, and little evidence to support their effectiveness has been reported [21, 23]. Strategies have mainly focused on building resilience and mental health literacy about suicide, where there is little evidential support in the general population [22]. Two of the most effective suicide prevention measures, physician education and restriction of lethal means [22], have not been applied in Indigenous programs [21]. Strategies that increase follow-up and support of young people who have presented following a suicide attempt, or strategies to increase antidepressant medication treatment rates for depressive disorder, have not been evaluated in the Indigenous context despite there being ‘persuasive’ data in support of their effectiveness in non-Indigenous communities [24]. One out of the five components of the Suicide Prevention in Country SA initiative (SPICA) did include an evidence-based strategy, namely education of service staff about suicide [25] but the evaluation report was apparently never published.
The Third five-year NMHP (2003-2008) was part of a national framework to reform mental health services provided for the general population, but contained a series of outcomes and key directions pertaining specifically to ATSI communities. Key directions concerned facilitating access and early intervention through primary care, inclusion of ATSI people in mental health policy-making and planning, delivering better care through partnerships between MHS and Social and Emotional Wellbeing Framework Agreement (SEWFA), improving cultural appropriateness in MHS, and workforce cultural awareness.

Evaluation: The Summary Evaluation of the NMHP 2003-2008 [26] reported no effectiveness data concerning ATSI populations as was reported for the First and Second NMHPs [27]. Indeed using mental disorder-related mortality rate as an index of effectiveness, mental health is the only field of medicine showing no improvement in Australia [28]. Although it is too soon to evaluate The Fourth NMHP 2009-2014, none of the proposed Indicators are specific to ATSI communities [www.health.gov.au/internet/mhsc/publishing.nsf/Content/3545C977B46C5809CA25770D00093C93/$File/Fourth%20NMHP%20Implementation%20Strategy%20Final%20Endorsed%20AHMC%20201110.pdf].
Supplementary Table 3: Assessment Instruments

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<tr>
<th>S3.1 ENUMERATION OF INDIGENOUS PEOPLE</th>
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<td><strong>Description:</strong> The question-and-answer set used to enumerate Indigenous people in Australian censuses since 1911 has been modified 11 times to result in the current standard question. The Standard question is based on the Commonwealth definition of an Aboriginal or Torres Strait Islander: “A person of ATSI descent, who identifies as being of Aboriginal or Torres Strait Islander origin, and who is accepted as such by the community with which the person associates.” Since 1981 the standard question has been: “Is the person of Aboriginal or Torres Strait Islander origin?” (No; Yes, Aboriginal; Yes, Torres Strait Islander). Strict rules apply to asking the question precisely, and coding responses (<a href="http://www.aihw.gov.au/indigenous/national_standards/collective_ind_status.cfm">www.aihw.gov.au/indigenous/national_standards/collective_ind_status.cfm</a>). As accurate identification of ATSI clients is essential for measuring effectiveness of services, quality of Indigenous identification data in major health data collections has been reviewed in detail [29] and there are a number of State-based training packages supporting accurate recording of Indigenous Status by health service staff, as well as one designed by the ABS in 1999.</td>
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<td><strong>Evaluation:</strong> As part of the 2006 Census, the Indigenous Enumeration Strategy assessed standards and tailored interview and interviewer forms, in addition to the standard household form. Special collectors skilled in Indigenous languages and culture were available to assist in remote areas. There did not appear to be problems associated with the INGP question which had a non-response rate of 0.7% using customised methods. Using the standard household form in the 2006 Census, there was a non-response rate for the INGP of 5.7%. Most of this non-response rate was attributable to 4.1% of persons in households where a Census form was not completed at all. Dwelling non-response rate in remote communities was most evident where there were difficulties recruiting and retaining Special Census Collectors (<a href="http://www.abs.gov.au/Ausstats/abs@.nsf/0/752392619B85E163CA25729E0008A87F?opendocument">www.abs.gov.au/Ausstats/abs@.nsf/0/752392619B85E163CA25729E0008A87F?opendocument</a>, accessed 22 February 2011).</td>
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<th>S3.2 SCREENING INSTRUMENTS</th>
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<tr>
<td><strong>3.2.1 Kessler Psychological Distress Scale (K-10)</strong></td>
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<td><strong>Description:</strong> The K-10 is a non-specific psychological distress scale that consists of 10 items (K-10) designed to measure levels of anxiety and depression in the four weeks prior to interview [30].</td>
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<td><strong>Evaluation:</strong> The unmodified K-10 has been used in health surveys of Indigenous populations [31, 32]. Difficulties with its use were not reported. After stakeholder consultation, a 5-item version with slight wording changes to two items to improve language understandability (K-5) was included in the National ATSI Health Survey [33]. Indigenous facilitators were engaged in remote areas to assist with interviewing. Questions were asked in English if the respondent was functionally literate in English. Otherwise, they were translated into the respondent’s own language by the Indigenous facilitator and their answers were conveyed back to the interviewer in English. Psychometric performance appeared to be satisfactory [33]. Burgess et al (2009) used the K-5 with good effect in remote communities [34].</td>
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| **3.2.2 The Patient Health Questionnaire Depression Module (PHQ-9).** |
| **Description:** The Patient Health Questionnaire (PHQ) is a self-administered version of the PRIME-MD (Primary Care Evaluation of Mental Disorder) diagnostic instrument for common mental disorders in primary care [35]. The PHQ-9 is the 9-item depression module, which scores each of the 9 DSM-IV criteria as ‘0’ (not at all) to ‘3’ (nearly every day). In non-indigenous U.S. samples, the PHQ-9 had excellent case finding sensitivity and specificity when compared to a mental health professional diagnosis of major depression [36, 37] as did the PHQ-2, which only included the first two items [38]. Additional specificity for the PHQ-2 was achieved by asking for each item the question: Is this something with which you would like help? [39]. |
| **Evaluation:** The acceptability of the PHQ-9 in Indigenous ACCHS’s was assessed in Indigenous focus groups [40]. To increase acceptability it was recommended that: the Aboriginal Health Worker administer it; three items have alternate wording if the original wording was not understood; and a tenth item assessing angry feelings be added [40]. This Modified PHQ-9 was pilot tested in 34 English speaking Indigenous patients with ischemic heart disease attending a Darwin ACCHS |
When compared with a clinical diagnosis of depression disorder derived from a semi-structured clinical interview by a GP (of unknown validity), the Modified PHQ-9 appeared to have lower ability to discriminate cases of depressive disorder from non-cases, compared with its use in non-Indigenous populations [41]. Esler et al acknowledged the methodological limitation of their study. As part of the Adult Health Checks, the unmodified PHQ-2 wording appears to perform satisfactorily in English-speaking urban Indigenous patients attending mainstream general practices [42].

S3.2.3 Psychosis Screen Items (G Items) of the Composite International Diagnostic Interview (CIDI)

**Description:** The CIDI Psychosis Items screen for psychotic experiences in the past 12 months: delusions of control, thought interference and passivity (G1/G1A), delusions of reference or persecution (G2/G1A), and grandiose delusions (G3/G3A), and past ever diagnosis of schizophrenia (G4). Hallucinations are not screened for [43].

**Evaluation:** In a diagnostic assessment of NSW Indigenous prisoners, the CIDI Psychosis Screen Items appeared to perform well with Indigenous interviewers not reporting any general difficulties regarding the items or that Aboriginal interviewees could not comprehend the questions [44].

S3.2.4 Life Stressors

**Description:** The ABS selected 15 items (e.g. serious accident, death in family, divorce), based on national Indigenous consultation, to measure exposure to stressful events in the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) [45] and the 2004-05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) [46].

**Evaluation:** No problem with the 15 Life Stressors items were reported in the 2002 NATSISS, and scores correlated with other variables in a predictable way [33]. A slightly modified version of the ABS items was formally evaluated and found to have high acceptability and internal reliability [47].

S3.3 DIAGNOSTIC INTERVIEWS

The Composite International Diagnostic Interview (CIDI)

**Description:** The CIDI is the World Health Organisation-auspiced structured diagnostic interview for administration by trained non-clinical interviewers [48], that has been evaluated in many different countries and cultures.

**Evaluation:** The CIDI appeared to be applicable and sensitive in an urban English-speaking Indigenous population [44] and is apparently feasible for use in remote Indigenous communities [49].

S3.4 CONSUMER OUTCOMES

S3.4 The Health of the Nation Outcome Scales (HoNOS)

**Description:** The HoNOS was designed to be routinely used to measure outcomes for adults with mental illness. It has been implemented in both English and non-English speaking countries, where it has been appraised to have adequate psychometric properties, though the reliability of some scales has been reported to be unacceptable [50]. The HoNOS [51, 52] consists of 12 scales measuring behaviour, impairment, symptoms, and social function and is rated by clinicians after routine clinical assessments. Based on input from the NT Indigenous stream of the Australian Integrated Mental Health Initiative (AIMhi NT), Queensland Health developed guidelines for the use of the HoNOS for Indigenous patients.

**Evaluation:** This is no published evaluation of the Queensland HoNOS guidelines. Dawe et al (2010) report that there are ‘significant reservations’ about the use of the HoNOS [53] because even if the guidelines improve linguistic equivalence, the issue of conceptual equivalence [54] remains unaddressed.
### 3.5 Psychological and SEWB Measures

#### 3.5.1 Growth and Empowerment Measure (GEM)

**Description:** The three-part GEM [55] comprises (1) demographic and background information (2) a 14-item Emotional Empowerment Scale (EES) [4], and (3) 12 Empowerment Scenarios (12S). The EES aims to capture the extent to which the person is able to feel and show specific signs of well-being in their everyday life. The 12S aims to measure the extent to which the person has achieved movement between their lowest state of well-being to their highest. Item content was informed by the social determinants of disease literature and feedback interviews with Indigenous people undertaking a family well-being program based on empowerment concepts.

**Evaluation:** Both the EES and the 12S have satisfactory internal reliability and interpretable factor structure [55]. The GEM appears to be tapping psychological constructs that were relatively independent of the distress items of a slightly modified K-10, though with significant overlap. No information is provided on methods of administration, however there were significant rates of incomplete items [55].

#### 3.5.2 Caring for Country (CFC)

**Description:** The CFC questionnaire aims to measure the Indigenous vernacular concept of ‘Country’ that describes the interdependent relationship between Indigenous people and their ancestral estates, encompassing (1) spending time on Country, (2) participation in seasonal burning of annual grasses, (3) gathering of food and medicinal resources, (4) performing ceremonies, (5) production of art works, and (6) protecting sacred areas [56]. The CFC is an interviewer-administered questionnaire which asks interviewees how often they participate in the 6 CFC activities, and uses a 4-point scale.

**Evaluation:** The CFC questionnaire items have adequate interval and test-retest reliabilities, appear to represent a single factor as it was intended to, which validly correlates with relevant socio-demographic variables [56]. As predicted, CFC scores correlated with indices of good physical health [56].

#### 3.5.3 Aboriginal Cultural Engagement Survey

**Description:** The ACES questionnaire was developed to assess the level of cultural engagement of Indigenous health clients. Cultural engagement was defined as “the degree to which individuals are embedded within their cultural traditions”. Caring for Country (see item 3.5.2) was considered only one aspect of cultural engagement, which is viewed as including a wide variety of activities (e.g. cooking practices, traditional artwork, music and dance, and participation in community practices (ceremonial meetings)). The ACES is a 21 item self-report questionnaire rated using a four-point Likert scale (not at all; a little; a fair bit; a lot).

**Evaluation:** Starting with a pool of reliable items from existing scales, the designers validated additional items in four rounds of testing, using ratings of item relevance by Indigenous consultants thereby ensuring high content validity [57]. Reliability assessment was not reported.

#### 3.5.4 Positive Well-being (SF-36)

**Description:** Four items (In the last four weeks, about how often: Did you feel calm and peaceful? Have you been a happy person? Did you feel full of life? Did you have a lot of energy?) were selected from the mental health and vitality subscales of the Short Form 36 Health Survey [58] for the National ATSI Social Survey [NATSIISS] [45] and the 2004-05 NATSIHS [46].

**Evaluation:** No problems with the four SF-36 items were reported in the 2002 NATSISS, and responses correlated with other relevant variables in a predictable way [33].
S3.5.5 Angry Feelings

**Description:** Five questions adopted from a study of American Indians (How often in the previous four weeks have you been bothered or upset by any of the following: Feeling easily annoyed or irritated? Having violent thoughts like wanting to beat, injure or harm someone? Wanting to break or smash things? Getting into a lot of arguments? Shouting or throwing things?) were trialled in the 2002 NATSISS [45].

**Evaluation:** No problems with the four Angry Feelings items were reported in the 2002 NATSISS, and scores correlated with other variables in a predictable way [33].

S3.6 YOUTH ASSESSMENTS

S3.6.1 Strengths and Difficulties Questionnaire (SDQ)

**Description:** The SDQ comprises 25 items probing in children and adolescents (4-17 years) five areas of behaviour over the past six months: emotional symptoms; conduct problems; hyperactivity; peer problems and social behaviour [59]. The SDQ has good psychometric properties and takes five minutes to administer in non-Indigenous populations. In the Western Australian Aboriginal Child Health Survey (WAACHS) the wording of the SDQ was slightly modified in order to facilitate oral administration of the survey [60], which is typically written, and to make the language used more compatible with that of young Indigenous respondents [61].

The standard form of the SDQ is mandated for clinical use and in most Indigenous public health programs (e.g. [62]).

**Evaluation:** The modified SDQ performed well as an indicator of risk status for clinically significant emotional or behavioural difficulties in the WAACHS, and analyses suggest that this version had good internal reliability and construct validity [63]. The unmodified SDQ was used in Computer Assisted Telephone Interviewing of carers of Aboriginal children in NSW [32, 62] and detected comparably elevated rates of behavioural difficulties as found in the WAACHS, but no information about its reliability or validity in Indigenous young people is available. A qualitative study of the acceptability of the SDQ items supports the need for modified wording of some items, but found that overall there was a high level of cross-cultural understanding of the behaviours described in the SDQ [63].

S3.6.2 Westerman Aboriginal Symptom Checklist for Youth (WASC-Y)

**Description:** The WASC-Y is a 53 self-report item inventory that has been trialled in both urban and rural Indigenous young people aged 13-17 years (n=183) in Western Australia. It includes six subscales (depression; suicide; alcohol/drug usage; impulsivity; anxiety and cultural resilience) and guidelines for administration [64, 65]. Questions 1-13 and 19-56 use a 5-point Likert scale (Never; Little Bit; Half and Half; Fair Bit; Heaps), whilst items 14-18 are True/False questions.

**Evaluation:** In an unpublished manual, internal reliability and validity in a sample of 183 Indigenous young people are reported to be good [64, 65]. Agreement between the WASC-Y and a “culturally/clinically validation interview” is also reported to be very high in an un-blinded study. Exploratory factor analysis supported the six subscale structure of the WASC-Y. No independent replication studies of WASC-Y psychometric properties have been published. Propriety ownership of the WASC-Y and the costs involved in its use may have hindered more definitive appraisal of the WASC-Y.

S3.6.3 Strong Souls (SS)

**Description:** The SS is a 25 item SEWB questionnaire with a 4-point Likert self-rating scale (How often symptoms experienced in the past few months?: Not much; Little Bit; Fair Bit; Lots). Items were selected from a pool of published items from existing scales used with young people (K-10, SDQ and WASC-Y). After slight wording changes 34 items were included in the pilot version and 25 items in the final version of the SS. The SS is administered one on one, with an interpreter if required, questions read aloud and the respondent answers verbally or by pointing at their options of choice [66]. An abbreviated 8-item version of the SS has been designed to screen for psychological comorbidity in Indigenous substance use disorder populations [67] and adapted for computer-assisted administration. Using a computer, the question and response options were spoken aloud to respondents who then in turn used the mouse to select their preferred option.

**Evaluation:** The SS was trialled in a NT Indigenous sample aged 16-20 years (n=361). The 25 items with the lowest missing data rates and highest cross-correlations were factor analysed to produce four interpretable components or subscales: Anxiety, Resilience, Depression, and Suicidality. The Anxiety component
captured most variance and had the most satisfactory internal reliability [66]. That is, the SS reflected the good construct validity of the scales from which its items were derived. All but one SS subscale demonstrated good internal reliability (>0.7), though the Resilience items showed only moderate reliability. The 8-item version administered by computer was trialled in a large mixed urban-rural English-speaking Indigenous sample \( n=407; \) aged 11-68 years) attending either residential drug rehabilitation centres or tertiary education institutions in Northern Territory (NT) [67]. Reliability of the 8 items together was good with \( \alpha=0.74 \). The only psychosis-related item (‘voices’) attracted a high missing data rate of 15.6% and the authors suggested that capturing culturally applicable experiences of hallucinations by self-report questionnaire may not be feasible.

### S3.6.4 Self-concept

**Description:** A 38-item self-report questionnaire designed for use with Indigenous and non-Indigenous young people attending school was constructed by drawing items from several reliable and widely used measures of self-concept and self-esteem to represent six dimensions of self-concept: Family, Self-Acceptance, General School, Academic Achievement, Peer and Career [68]. Students use a 6-point rating scale (from 1=strongly disagree to 6=strongly agree) to indicate the extent to which they agree with each statement (item).

**Evaluation:** In a multi-school \( n=17 \) study of 625 students, 329 of whom identified as Indigenous, the 38-item instrument was completed anonymously in class. A teacher read aloud the survey instructions and helped if literacy levels hampered understanding of the content, though students were asked to work independently. Factor analysis (FA) identified 29 items to best represent the six factors. Confirmatory FA carried out for Indigenous and Non-Indigenous student groups separately confirmed the six factor structure in both groups, though there were across-group differences in factor inter-relationships. Self-concept ratings were equally predictive of self-rated academic achievement in both groups. Measurement invariance across the groups supported the use of the same self-construct instrument for both Indigenous and Non-Indigenous students [68].

### S3.6.5 Self-esteem

**Description:** A 7-item project-specific youth self-report scale designed to assess self-image, feelings of self-worth and efficacy was used in the WAACHS. Young people (12-17 years) were asked to rate items (‘How much do these statements sound like you?’) on a 5-point scale, from ‘Not at all’ to ‘Very much’, [69].

**Evaluation:** Little formal evaluation of the WAACHS self-esteem items is reported. The only negative statement did not fit into the single factor that the other 6 positive statements loaded upon. Therefore analysis was based on the 6 positive items and their scores were summed to give a total score [69]. About 75% of young people surveyed completed the items, whilst 19% required interviewer assistance.

### S3.7 FAMILY ASSESSMENTS

#### S3.7.1 WAACHS Family Functioning Scale

**Description:** A 9-item family functioning rating scale based on items from the 57-item McMaster Family Assessment Device was designed for the WAACHS to measure the extent to which families had established a climate of cooperation, emotional support and good communication, to be completed by the primary carer of the surveyed children [69]. Item development was guided by community consultation and item wording completed with a panel of Indigenous health professions. Carers used a five-point rating scale (Not at all; A little; Some; Quite a lot; Very much). Responses were summed to produce an overall score for function.

**Evaluation:** Little formal evaluation of the WAACHS Family Functioning Scale is reported. Multi-dimensional scaling and factorial analysis showed no clear underlying factor structure and the items were summed as a single dimension [60].

#### S3.7.2 Family Environment Scale (FES)

**Description:** The FES was designed to describe the social environment of a family as perceived by its members [70]. It has two versions, one consisting of 90 true-false items with nine items in each of ten subscales, and an Abbreviated FES with 45 items that form five 9-item subscales (Cohesion; Expression; Conflict; Organisation; Control). Only the latter has been trialled in an Australian Indigenous sample [71].
Evaluation: With non-Indigenous families of children [72] and adolescents [73], most of the Abbreviated FES subscales have unacceptable internal reliability (only Conflict showing adequate reliability) and unsatisfactory item-level structure [72]. Family function was assessed using the Abbreviated FES in 99 Indigenous people living in a remote North Queensland community. Only items that correlated with the total score were used, resulting in 20 items for analysis. Factor analysis revealed many factors, but only the 10 items loading on the first three factors were retained, items considered to reflect aspects of two FES subscales, Cohesion and Conflict, and a novel factor named Independence. Assessment of the reliability of the revised subscale structure (Cohesion, $\alpha = 0.72$; Conflict, $\alpha = 6.68$; Independence, $\alpha = 0.58$) indicated questionable internal reliability [71]. The validity of the revised subscales is unknown.

### S3.8 DRUG AND ALCOHOL ASSESSMENTS

#### S3.8.1 The Alcohol Use Disorders Identification Test (AUDIT)

**Description:** The AUDIT was developed as a screening instrument for hazardous and harmful alcohol consumption under the auspices of WHO and psychometrics determined across six culturally diverse settings [53]. It is a 10-item questionnaire covering alcohol consumption, drinking behaviour, and alcohol-related problems. Responses to each question are scored from 0 to 4 (the single total score indexes global risk), giving a maximum possible score of 40 ($\geq 8$ = hazardous or harmful drinking) [74].

**Evaluation:** Though the AUDIT has shown extensive cross cultural applicability, excellent internal reliability ($\alpha > 0.9$) and validity in terms of interview-based measures [74], limited evaluation with Indigenous people has occurred [53]. The two studies evaluating the AUDIT in Indigenous samples, one in a remote community [71] and the other in urban Indigenous people abusing injectable drugs [75] confirmed high reliability and a single factor structure. A computerised version of the AUDIT has been developed in Victoria designed specifically for use among Indigenous people [53].

#### S3.8.2 The CAGE (Cutdown Annoyed Guilty Eye-Opener)

**Description:** The CAGE is a four yes/no item index of life-time psychological dependence and alcohol related problems, and does not assess quantity or frequency of alcohol use [53]. It has been shown to be reliable, and valid when compared against alternate indices of alcohol misuse in non-Indigenous populations [76]. There is evidence of cross-cultural variability [77] and a need to increase sensitivity with alternate items for young people [78].

**Evaluation:** Evaluation of the CAGE with Indigenous people is limited to confirming that high scores are associated with higher alcohol consumption [79, 80] and that there is a need for adjustment of the wording of the CAGE items to be more easily understood by Indigenous respondents [81].

#### S3.8.3 Indigenous Risk Impact Screen (IRIS)

**Description:** The IRIS was developed to screen for alcohol and drug, and mental health issues, within the one instrument [82]. Drug use is measured in terms of total or overall substance use, rather than each drug separately or the primary drug use. Using a series of focus groups (12 Indigenous academics; 46 drug and alcohol workers; and 14 Indigenous lay people) 24 items (12 related to substance use and 12 related to mental health) were selected for the original IRIS questionnaire. Exactly how items were identified for the selection process is unclear but all can be recognised as fairly standard probes. After field trialling with 175 Indigenous adults from urban, rural, and remote locations in Queensland the revised IRIS instrument was finalised with a total of 13 items (7 related to substance use and 6 related to mental health) using Likert scales with a variable number of scoring points that yielded a total drug and alcohol subscale score of 7 to 28, and a total mental health sub-scale score of 6 to 18. The IRIS was administered by one-to-one interview by a health worker who clarified item comprehension issues that arose during the interview [82].

**Evaluation:** In the IRIS field trial, factor analysis confirmed the two subscale structure [82] and high internal consistency of item ratings for each factor (alcohol and drug factor, $\alpha = 0.84$; mental health factor, $\alpha = 0.81$). Re-test reliability was adequate at least for the 13 items in the revised IRIS. Convergent validity against alternate drug and alcohol use, and mental health, measures was satisfactory. Dawe et al (2010) raised concern that Indigenous consultation about the IRIS mental health items appeared to be less than that for the GEM or Strong Souls instruments [53], and that the IRIS mental health items may not be culturally equivalent.
**Supplementary Table 4: Discrete Interventions**

### S4.1 MENTAL HEALTH LITERACY AND HEALTH PROMOTION

#### S4.1.1 Indigenous Mental Health First Aid (MHFA) Instructor Training Course

**Description:** The MHFA Training Course trains members of the public to give help early to people with developing mental health problems and to give assistance in mental health crises, following the well-established procedures applied to physical first aid (see www.mhfa.com.au). The course involves 12 hours of training and is structured around 5 steps and covers 4 mental health problems, including psychosis, and 5 crisis situations, including a psychotic person who is perceived as threatening [83]. The first aid recommendations are based on 89 items selected by consensus across groups of consumers, carers and clinicians [84]. In two RCTs, the standard MHFA Training course has been found to improve knowledge, and attitudes and helping behaviour in non-Indigenous members of the public [83]. The MHFA course was considered highly relevant by early intervention experts [85]. The MHFA Training Course has been culturally adapted for use with Indigenous communities [86].

**Evaluation:** The Indigenous MHFA Instructor Training Course was developed for use in training Indigenous Instructors (ie. train-the-trainer model) by consulting with Indigenous mental health professionals who judged the course modifications as culturally appropriate. In initial field trials, 199 Indigenous Instructors were trained [86, 87]. Effectiveness was assessed by the number of trainees who subsequently ran MHFA courses in Indigenous Communities (40%) and qualitative feedback from focus groups of course Instructors/participants, which indicated that the training was culturally appropriate, empowering, and provided relevant information to assist Indigenous people with a mental illness [86, 87].

#### S4.1.2 The HITnet alcohol health literacy intervention

**Description:** The Health Interactive Technology Network (HITnet) developed culturally appropriate health education modules delivered interactively using touch screen technology with audio and print-out feedback. Modules were delivered via computer kiosks in Cape York communities. A narrative approach was utilised in an alcohol use module which allows the user to explore choice-contingent consequences within the narrative. Production was carried out locally in collaboration with local health service providers and community leaders, and using untrained actors from the local community [88-91].

**Evaluation:** Evaluation of the Indigenous HITnet alcohol module was based on evaluations of other touch-screen health information initiatives for non-indigenous patients published internationally [89]. Quantitative process evaluation data was captured by the kiosk computer as ‘trace metrics’ (recording the number of activations, what users accessed, tracking and timing their access); on-screen questionnaires; and by focus group and semi-structured interview feedback [88-91]. The evaluation demonstrated adequate acceptability and use, especially if the kiosk was situated in a health service environment. Young people found kiosks easier to use. The use of local untrained young actors and community members to develop and maintain kiosk equipment and software, was found to increase the interest of young Indigenous people in the health messages [88-91]. Impact/outcome evaluation has not been reported to date.

#### S4.1.3 SEWB Empowerment interventions

**Description:** The first structured version, the Family Wellbeing (FWB) program [92] involved weekly 4-hour meetings for at least 10 weeks as a personal development course. Groups focus on support and trust-building delivering a program covering problem-solving, self-awareness assertiveness and other life skills training, and psychoeducation, whilst encouraging an activist approach to personal and political transformation in the belief that individuals and communities are the real agents for meaningful change. FWB has been adapted to target men’s groups [93-95] for school aged children [96, 97] and suicide prevention (Centre for Rural and Remote Mental Health Queensland, 2009: www.crrmhq.com.au, Access date 30 October 2011). Design of Indigenous-led interventions is in line with empowerment principles in the Ottawa Charter for Health Promotion and social determinants of health literature (e.g. [98-100]), which propose community control as essential for reducing health disparities.

**Evaluation:** No quantitative or health outcome evaluation has been reported. Although repeated but limited qualitative evaluations have been conducted, the results are mainly based on unstructured interview feedback. The first evaluation of FWB, which included only 12 of the 31 participants, reported personal attitudinal
change mainly in middle aged women [92]. A series of subsequent evaluations included larger numbers of participants, all providing positive feedback [101, 102]. Rees et al (2004) reported follow-up interviews in 2002 of 28/52 FWB graduates [103], which suggested they were more assertive in personal relationships and activist in their communities, but the participants were all at least high school educated middle-aged employed (mostly human service providers), almost all women. Although Tsey et al [93] reported positive results for an empowerment initiative (Yarrabah Men’s Health Group, Yubba Bimbie) it was impossible to be sure whether this effect was due to treatment, and not due to losing the local alcohol canteen in 1997, which was also temporally associated with a large drop in suicides (see Fig 7, p64 [104]) the year before the Men’s group started in 1998. Tsey et al [94, 95] reported improvements on a rating scale designed to show change on the Do’s and Don’t Value Statements (achieving a man’s “rightful place” in the community) between 2001 and 2004 when the Group was active, which appeared to correlate with behavioural change as reported when other nine people in community were interviewed.

S4.2 EARLY INTERVENTION

S4.2.1 Positive Parenting Program (‘Triple P’)

_Description:_ The Positive Parenting Program often referred to as ‘Triple P’ was developed by The Parenting and Family Support Centre, The University of Queensland (UQ-PFSC), with five levels of intensity designed to prevent behavioural problems in children by enhancing the knowledge, skills, and confidence of parents (see www.triplep.net). Level 4 (Standard Group Triple P) is an 8-session program involving discussing and skill training (modelling, rehearsal, feedback and homework) parents in 17 core child management strategies aimed at helping parents to promote children competencies (e.g. praise, engaging activities, incidental teaching) and managing misbehaviour (e.g. setting rules, giving clear instruction, consequences, quiet time), plus planned activities at home to increase generalisation [105]. In non-Indigenous samples, treatment outcome studies report large effect sizes with good maintenance of treatment gains [106]. After an approach from Indigenous health workers, the UQ-PFSC spent five years developing resources to be engaging in a culturally acceptable way to Indigenous parents [107]. This included a culturally tailored video and workbook, and altering the structure of group sessions to allow more time to discuss social and political context for parenting, to develop trust, to slow the pace of presentation, and to share personal stories. Group were co-facilitated by one Triple-P-trained Child Health Nurse (who also received training in cultural sensitivity and adaptation of the program) and one Indigenous Health Worker.

_Evaluation:_ Turner at el (2007) carried out a randomised controlled trial of the Group Triple P program adapted for Indigenous families [107] using culturally sensitive research process [108]. Twenty-six families were randomly allocated to Group Triple P and 25 to the wait list group. In families completing the post-invention assessments, there were significant large to moderate sized improvements in child behaviour only in the Triple P group [107]. Qualitative data regarding the cultural acceptability of resources, content, and processes of tailoring the program were ‘consistently positive’, which presumably included attitudes to the several culturally unadapted rating scale. This was the first RCT ever carried out trialling a mental health intervention for Indigenous people.

S4.2.2 Exploring Together Program (Let’s start/ Ngaripirliaga‘ajirri)

_Description:_ The Exploring Together Program (ETP) is a 10-week children’s group (anger management, problem-solving and social skills training), a parents’ group (parenting skills training and dealing with parents’ own issues), and a combined children’s and parents’ group (to target parent-child interactions) designed as an early intervention for children with behaviour problems, and their parents (www.exploringtogether.com.au). It was originally designed for non-Indigenous families and has versions for pre-school children, primary school children, and adolescents. In non-Indigenous settings (children 5-14 years), in a non-randomised trial comparing ETP to wait-listed children, ETP showed improvement of large effect size for externalising behaviour (delinquent and aggressive), and improvement of medium effect size for internalising behaviour (withdrawn, somatic complaints, anxious-depressed) at the end of the intervention (pre-post difference), and at 6 month (in 58% of the original sample) and 12 month follow-up (in 45% of the original sample), moderate sized improvements were maintained [109]. The first adaptation for Indigenous primary school children was trialled with Tiwi families, where ETP was called Ngaripirliaga‘ajirri (‘helping each other to clear a path’) and then more broadly implemented in NT as the ‘Let’s Start: Exploring Together’ Indigenous Preschool Project (Charles Darwin University/ Menzies School of Health Research: go to www.menzies.edu.au).
**Evaluation:** After Indigenous adaptation (picking up of children/parents by vehicle, making special child-care and release from parental work arrangements, adjustments to take into account literacy levels, adding a focus to the role of kin in care giving, acknowledging extraordinary domestic stress related to substance use or suicidal threats by parents etc) 90 Tiwi Island children who received the ETP (called Ngaripirliga’ajirri) were compared with 48 non-referred children in a non-randomised design using an improvised behaviour problem checklist for rating problem frequency by parents and teachers, which showed a moderate-sized advantage to the treatment group at 6 months follow-up as rated by teachers [110]. Secondary analyses indicated the advantage was likely to be a treatment effect. Family functioning was predictive of outcomes and the program focus was shifted to address this domain [111].

#### S4.3 ENGAGEMENT INTERVENTIONS

**S4.3.1 Sense of Cultural Yarn Interview Protocol**

**Description:** Westerman (2010) described procedures for engaging Indigenous young people at the process level (use of cultural consultants; use of indirect questioning to elicit problem descriptions by story-telling; symptom assessment across cultural and mainstream contexts) and the practitioner level (clinician self-disclosure of family background; gender and age matching appropriateness; community visibility of clinician; ‘goodness of spirit’; third-party referrals), along with an 11-stage engagement model [112].

**Evaluation:** The development and evaluation of the *Sense of Cultural Yarn Interview Protocol* and associated *Acculturation Scale for Aboriginal Youth* are described in an unpublished thesis [65], which was not available to the present authors. Apparently the model was effective in engaging 97% of a young (aged 13-17 years) Indigenous sample (n=103) [65].

**S4.3.2 Family service intervention model**

**Description:** The Northern Districts Community Support Group (NDCSG) Family Counselling Service, Morawa, WA developed, for use by non-Indigenous practitioners, an engagement model suitable for Aboriginal clients [113]. The intervention targets three barriers to engagement: low levels of cultural competence; distrust and discrimination; and failure to offer practical assistance in crisis situations. The intervention addresses these barriers building rapport to the point where discussion explores the underlying mental health and related issues that may be underpinning the surface problems requiring practical social welfare assistance. Cultural competence required familiarity with local linguistic groups, cultural practices, and gender rules. Trust-building involved working within the community in outreach roles so that the practitioner had high visibility. Practical assistance including effectiveness responding to crises such as domestic violence, electricity service disconnection, or having no money to buy food for children. Interagency networking is described as essential to manage a complex crisis. Problem exploration required a non-directive interviewing approach that begins with an invitation to discuss the practical problem and leads slowly to related family and mental health issues [113].

**Evaluation:** No formal evaluation has been undertaken. However, before the NDCSC Family Counselling Service adopted this engagement intervention, Aboriginal people made up less that 8% of the total client load each year, whereas after 2005 when the intervention was systematically adopted, the proportion of Aboriginal clients increased to 58% of the total caseload [113].

#### S4.4 MANAGEMENT OF PSYCHOTIC DISORDERS

**S4.4.1 Better medication management for Aboriginal people with mental disorders and their carers**

**Description:** This State-wide project in SA that explored issues related to medication use (by surveys, interviews and focus groups) identified many problems mitigating against quality medication use, and made 32 recommendations to improve medication management [114].

**Evaluation:** The 348 page Final Report [114] included very limited evaluation data, apart from qualitative assessment of improved medication use knowledge by health workers attending educational sessions supported by the project. The project did highlight important barriers to quality medication use (poor access to pharmacy skills; a lack of medication information resource for users; high rates of physical comorbidity necessitating multiple medication for most mentally ill...
patients) and the need to address these issues [115] as well as stimulating the development of an unevaluated protocol for triage of immediate risk in mental health crises, and assessment, intervention and referral [116].

**S4.4.2 AIMhi NT Collaborative Care planning package**

*Description:* The AIMhi Care plan package is a motivational interview with care planning and disease management education. It incorporates a story telling approach, self-management principles, information about relapse triggers, early warning signs, medication, and crisis planning, designed in collaboration with Indigenous families, elders and traditional healers [117].

*Evaluation:* Indigenous mental health patients (most clients with a diagnosis of schizophrenia) and their carers responded positively to the cross-cultural stories and engaged well with the goal-setting that was highly relevant to relapse prevention [117, 118]. Using a randomised controlled trial design, outcome was measured using the HoNOS at 12 and 18 months post-intervention [119]. HoNOS scores were significantly improved in the group receiving the package.

**S4.5 DRUG AND ALCOHOL INTERVENTIONS**

**S4.5.1 Population-based interventions**

*Description:* These interventions are classified in the NDS as 1) demand reduction, 2) supply reduction and 3) harm reduction. Most have targeted the abuse of alcohol. Demand reduction interventions directly target the social determinants of substance use (e.g. improved educational and employment opportunities) and a number of health promotion interventions (reviewed in [120]). Supply reduction interventions use liquor-licensing legislation to control availability. Harm reduction interventions aim to reduce immediate harm associated with substance use, and include night patrols, sobering up shelters and personal injury prevention initiatives.

*Evaluation:* Demand reduction strategies are difficult to evaluate, but a number of specific health promotion interventions have been trialled with equivocal results [121]. Supply reduction interventions for alcohol use have been evaluated and can be effective [121-123]. Supply reduction has been effective in relation to petrol sniffing when aviation fuel (OPAL) has been substituted for petrol [123] but not when the measure to reduce availability has been to lock up petrol supplies (see p38 [123]).

**S4.5.2 Tobacco interventions**

*Description:* There is an abundance of Level I and II evidence for interventions that are effective in reducing the prevalence of tobacco use in non-Indigenous populations. Interventions known to be effective in reducing tobacco use include: (1) brief advice from health professionals; (2) nicotine replacement therapy and bupropion; (3) training health professionals in brief interventions; (4) interventions for pregnant women who smoke; (5) high-intensity hospital-based smoking cessation interventions; (6) mass media campaigns; (7) media advertising; (8) school education programs; (9) workplace-based programs; (10) Quit courses and Quitlines; (11) control of advertising and tobacco sales promotion; (12) control of tobacco packaging; (13) smoke-free public places; and (14) increasing taxation [124].

*Evaluation:* Very few of these interventions have been evaluated at all in Indigenous communities. Where evaluations have formally occurred they have been minimalistic, offering no more that Level III or IV evidence, and none have used smoking cessation as an outcome. No RCTs have been conducted [124]. This situation is despite much of the premature mortality in Indigenous people being related to tobacco use.

**S4.5.3 Benelong Haven’s Psych Group**

*Description:* Group leaders were two non-Indigenous psychologists. Weekly sessions lasted about two hours; and were attended by 20 to 30 men who were current residents at the alcohol and drug treatment centre. Elements of CBT (challenging negative assumptions, encouragement to monitor behaviour, and problem-solving) were embedded in rapport and trust building. Participant-led discussions of factors related to unhelpful emotions and behaviours were intended to lead to self-disclosure by story- telling or ‘yarning’. Acceptance of difference of opinion was encouraged [125].

*Evaluation:* No formal evaluation has been published but the ‘Psych Group’ appeared to be a highly acceptable psychotherapeutic format [125].
### S4.6 PRIMARY CARE

#### S4.6.1 Briefing opportunistic intervention (BOI) for alcohol misuse

**Description:** BOIs refer to brief therapeutic strategies delivered at the primary care level to individuals who drink excessively but are not complaining about or seeking help for alcohol problems. They usually include assessment, feedback, information, advice, and providing self-help materials. BOIs are consistently effective in non-Indigenous populations (WHO Brief Intervention Study Group, 1996), at least in the short-term for individuals with low-to-moderate levels of alcohol dependence. Brief motivational intervention was effective for substance misuse in a non-Indigenous sample with recent-onset psychosis [126]. Despite these findings, there has been little effort to make these interventions available to ATSI people through their health services [127].

**Evaluation:** A joint urban Aboriginal Medical Service-University study attempted to conduct a randomised controlled trial of a BOI [128] involving motivational interviewing (MI). After screening with the AUDIT (initially by the Aboriginal health worker and subsequently by the GP), Indigenous patients with hazardous drinking were consented and randomised to the brief MI intervention or treatment-as-usual. The RCT had to be abandoned because of low recruitment rates of eligible patients [128]. In a qualitative study of the failed RCT [129], screening with the AUDIT was considered problematic because the AUDIT was too long, but more importantly, because of reluctance of staff to ask Indigenous patients about alcohol use when this was not the presenting problem, especially when screening was done by Aboriginal health workers rather than the GP. Although the resources for GP use (a ‘ready reckoner’ to aid calculation of standard drinks and flip-chart with colour illustrations of the ‘good’ and ‘not so good’ consequences of drinking) were considered favourably by GPs, they did not continue to use them after study end. The GP training in MI received mixed reception. The MI intervention itself was considered by GPs to be highly applicable to Indigenous patients, and was allegedly incorporated into their routine practice.

#### S4.6.2 Clinical decision support software for alcohol-related health services

**Description:** As part of the Co-ordinated Care Trials (see above), an information system was designed to improve delivery of preventive primary care medical services by implementing locally developed best practice guidelines supported by an electronic care planning, recall and reminder system [130]. This system was installed in community health centres in NT (Tiwi Islands and Katherine West) and included clinical decision support for alcohol-related health services [131].

**Evaluation:** An evaluation involved repeated rounds of auditing over a three year period, which determined adherence to guidelines in terms of delivery of scheduled services. Introduction of the system was associated with short-term improvements in guideline adherence but after three years guideline adherence for alcohol-related health services was not improved [131].
### Supplementary Table 5: Resources supporting Indigenous mental health service delivery

#### S5.1 WEB-BASED INFORMATION SOURCES


**Description:** The Closing the Gap Clearinghouse was established in October 2009 by COAG to bring together evidence-based research on overcoming disadvantage for Indigenous Australians. It collects, systematically analyses and synthesises this evidence to reach conclusions about what works. It adds value by translating research findings into a format applicable for the needs of decision-makers and policy analysts (see website).

**Evaluation:** After one year of operation the Clearinghouse had assessed 298 pieces of research, released two issues papers and six resource sheets, established a research and evaluation register including 210 health building projects, and a help desk [132]. The Clearinghouse synthesized the overarching themes for successful programs and other evaluations [133].

**S5.1.2 Australian Indigenous Health InfoNet ([www.healthinfonet.ecu.edu.au](http://www.healthinfonet.ecu.edu.au))**

**Description:** The Australian Indigenous Health InfoNet is a Government funded Internet resource that aims to make research and other documented knowledge readily accessible. It includes published and unpublished materials about ATSI health and has a section on SEWB (including mental health).

**Evaluation:** No formal evaluation report was identified by the present authors. Informally, the authors were frequent users of the Health InfoNet to discover unpublished materials in preparing this manuscript.

**S5.1.3 The Royal Australian and New Zealand College of Psychiatrists (RANZCP) website ([www.ranzcp.org](http://www.ranzcp.org))**

**Description:** The RANZCP website has a number of Indigenous mental health resources including a number of submissions, policies, and guidelines. As well there is a link to the RANZCP Australian Indigenous mental health website. This website is intended to support health practitioners improve knowledge and understanding of ATSI mental health issues. There are a series of case studies with reading material for training, guidelines, descriptions of key issues, resources, and more links.

**Evaluation:** The present authors are unaware of a formal evaluation of the RANZCP Indigenous resources, perhaps due to their recent introduction.

#### S5.2 SEWB TEXT BOOKS AND PROTOCOLS


**Evaluation:** The Protocols as a whole have not been subject to formal evaluation. They have been endorsed by field leaders. Some tools supporting the Protocols have been evaluated as part of the AIMhi Project (see below).

**Description:** This 299-page reference book is intended for health practitioners in mainstream and ACCH services (Available at: [www.ichr.uwa.edu.au/files/user5/Working_Together_book_web_0.pdf](http://www.ichr.uwa.edu.au/files/user5/Working_Together_book_web_0.pdf)). Editors were affiliates of the Australian Council of Educational Research (HP) and, the Kulunga Research Network at the Telethon Institute for Child Health Research (WR, DP). It was funded by OATSIH. The Book has four parts. Part 1 (4 chapters) outlines historical, social, cultural and policy contexts. Part 2 (7 chapters) covers SEWB issues including specific mental disorders, determinants of disease, youth and family issues, substance misuse, and trauma. Part 3 (5 chapters) covers practice-related topics including cultural competency, engagement, assessment, and practice models. Part 4 (5 chapters) gives examples of SEWB programs.

**Evaluation:** The development of the Book was led by Indigenous mental health experts, and thus it incorporates culturally sensitive practice. There is almost no focus on intervention effectiveness evaluation.


**Description:** The Handbook provides culturally appropriate information on SEWB for non-Indigenous psychologists who intend to work with Indigenous people and communities.

**Evaluation:** This 525-page Handbook was the first of its kind. It is recognised by the Indigenous SEWB field as representing best practice but is now over 10 years old. The material mainly describes principles rather than specific interventions. There is almost no focus on intervention effectiveness evaluation.

S5.3 CONFERENCES


**Description:** This biennial conference is organised by the Centre for Rural and Remote Mental Health Queensland (CRRMHQ). For most Creating Futures Conferences (2006, 2008, and 2010) a selection of the conference presentations is published as a Supplement of Australasian Psychiatry. In contrast to the annual Australian Rural and Remote Mental Health Symposium (organised by the Australian and New Zealand Mental Health Association: [www.anzmh.asn.au](http://www.anzmh.asn.au)), the Creating Futures Conference themes are predominantly related to Indigenous issues, has strong Indigenous representation on its organising committee, and is auspiced by the CRRMHQ whose primary commitment is to Indigenous mental health.

**Evaluation:** The present authors are unaware of a published evaluation. The published proceedings indicate international speakers are invited, and publication of quality scientific papers is encouraged.

S5.4 MENTAL HEALTH PROMOTION

S5.4.1 The Indigenous Health Promotion Resources Guide, 2009

**Description:** The Guide comprehensively lists Australian culturally adapted general health education tools designed for use by ATSI health workers in Indigenous communities. It includes sections on Family Support, Family Violence, Gambling, Mental Health, SEWB, Substance Misuse, and Youth. It is a special publication by the Aboriginal and Islander Health Worker Journal.

**Evaluation:** Not formally evaluated. The success of the six editions since 1994 suggests the Guide has utility.

S5.4.2 Toughing it out pamphlet.

**Description:** This pamphlet was designed to engage school students in discussions about suicide and how to deal with suicidal thoughts rather than avoid discussing the topic [134]. The pamphlet is a self-help skill building tool for young people, based on evidence that few Indigenous people who commit suicide had prior contact with mental health services. The wording of the pamphlet was developed in an Indigenous service setting by the senior author who had worked many years as a general practitioner and who had personal experience of suicidal thoughts ([www.toughingitout.com](http://www.toughingitout.com)). The folded A4 sized pamphlet is available...

**Evaluation:** The pamphlet has been used for more than eight years in Indigenous health settings, in school, sporting and other youth service settings. Use in schools has not been associated with increased rates of suicide attempts or risk taking behaviour [134]. It has been endorsed by the Mind Matters program, part of the National Youth Suicide Prevention Strategy (see [www.mhws.agca.com.au](http://www.mhws.agca.com.au) for details).

### 5.5 SERVICE DEVELOPMENT TOOLS


**Description:** This resource was developed by the Mungabareena Aboriginal Corporation and Women’s Health, Goulburn North East in rural Victoria to improve cultural competence of mainstream services (see [www.whealth.com.au/mtww](http://www.whealth.com.au/mtww)). It was designed to meet the needs of non-Indigenous practitioners working in mainstream service settings who wanted to improve the cultural competence of their services. The resources include Aboriginal artwork and images for display in mainstream health service settings, information about local Aboriginal history and culture, protocols, and contacts; and resources to support work with Aboriginal clients, families and communities. Resources include colour posters, a service audit tool, a checklist for working with Aboriginal clients, a health promotion framework, welcoming signage, and an information guide.


#### 5.5.2 The ABCD Healthy for life clinical audit tools

**Description:** The Audit for Best Practice in Chronic Disease (ABCD) project (2002–2005) conducted initially in 12 Indigenous community health centres was built upon the clinical information management systems that were used in the ATSI Co-ordinated Care Trials (See Table 2, Item 2.3). Data collection software was incorporated into continuous quality improvement processes adapted for ACCHS settings [131, 135]. Clinical audit tools were developed, particularly addressing CPG for diabetes, hypertension and renal disease (see [www.menzies.edu.au/abcd](http://www.menzies.edu.au/abcd)). The project was extended to 130 ACCHS primary care services (2005–2009) and in 2009 a collaboration including the Lowitja Institute ([www.lowitja.org.au](http://www.lowitja.org.au)) established the ABCD National Research Partnership, with its own website ([www.one21seventy.org.au](http://www.one21seventy.org.au)). Mental health is included in the audit tools. The ABCD audit tools are relevant to early psychosis services because the assessment and treatment of metabolic syndrome remains a challenge.

**Evaluation:** The Initial 12-site ABCD Project demonstrated improved compliance with CPG for a range of physical health issues, especially diabetes and hypertension (see *ABCD Project Final Report*, 2007 at [www.menzies.edu.au](http://www.menzies.edu.au)). There is no evaluation of impacts on the direct management of mental disorder, but the high relevance of physical health comorbidity in psychotic disorder suggests these audit tools may be relevant.

### 5.6 RELAPSE PREVENTION

#### 5.6.1 AIMhii psychoeducational materials

**Description:** The AIMhii-NT initiative designed psychoeducational resources [117, 118]. These resources include animated videos and PowerPoint presentations, flip charts, information sheets, and a care plan in pictorial format (available at: Menzies.edu.au/research/healing-and-resilience/mental-health/aimhii-nt-australia) or at the Australian Indigenous Health InfoNet website ([www.healthinfonet.ecu.edu.au](http://www.healthinfonet.ecu.edu.au)). These resources draw on the application of story-telling [136] and pictorial presentation [137] to health message development in order to address evidence of pervasive miscommunication between non-Indigenous health workers and Indigenous patients [138] and the need for tools to aid communication in mental health care planning to prevent relapse.

**Evaluation:** Using an RCT design, integration of these resources into a brief motivational intervention were shown to improve HoNOS, K10, and alcohol dependency ratings in remote Indigenous patients with chronic mental illness [139], 60% with psychotic disorders and at risk of relapse [119].
### S5.7 RESOURCES FOR PRIMARY CARE

#### S5.7.1 Central Australian Rural Practitioner Association (CARPA) Standard Treatment Manual

**Description:** Currently in its Fifth Edition, the Manual covers all aspects of physical and mental health care in primary health settings. It has a succinct and easy-to-read ‘cookbook’ style, and is intended for a range of primary healthcare practitioners. The Manual focuses on what to do. It contains a section on Mental Health and Drug Problems (ordered at: [www.carpa.org.au](http://www.carpa.org.au)).

**Evaluation:** The Manual is widely used and is regularly reviewed. Feedback surveys of users indicate users refer to it on a daily basis ([www.carpa.org.au](http://www.carpa.org.au)). No formal evaluation has been reported on the section on mental health.


**Description:** The Recommendations are intended specifically for primary care, to assist practitioners with decisions about management of Indigenous people who present with alcohol-related problems. There are 12 sections and 15 Appendices containing resources. Development of the Recommendations was funded by OATSIH.

**Evaluation:** The Recommendations are based on best available evidence, but are not NHMRC compliant. They are detailed and comprehensive (126 pages). Their practicality is enhanced by having Key Points listed for each section.

### S5.8 DRUG AND ALCOHOL


**Description:** This booklet is a cultural adaptation of the NHMRC Australian Alcohol Guidelines so that health workers and drug counsellors can read information directly to their Indigenous clients. (Available from: [www.adac.org.au](http://www.adac.org.au).) It is supported by a number of associated materials, including: 1) Talking about alcohol with ATSI patients, second edition (pamphlet); 2) the AUDIT alcohol screen on a folded A3 sheet; 3) a ready reckoner for standard drinks; 4) Alcohol and your Health, a folded A3 survey of health consequence; and 5) Don’t Gamble With Your Health, a pack of health promotion playing cards (all available via the Australian Government or ADAC websites).

**Evaluation:** A qualitative evaluation based mainly on feedback from semi-structured telephone interviews with a sample of 50 ACCHOs has been carried out. Only half were aware of these resources, but amongst those that were many found individual resources useful [140]. After awareness, use of these resources was limited mostly due to staff time constraints. Interviews with Indigenous clients exposed to materials were not done, nor was an assessment of their knowledge as a result of exposure to the materials performed.

#### S5.8.2 Alcohol Treatment Guidelines for Indigenous Australians. Canberra: Commonwealth of Australia, 2007

**Description:** Based on a literature review of the scientific and grey literature, the Guidelines are intended for healthcare providers, Indigenous and Non-Indigenous, working with Indigenous people who are adversely affected by alcohol (Available from: [www.health.gov.au](http://www.health.gov.au)). There are four Parts: Introduction; Clinical management of alcohol problems – Tool Kit; Physical effects of alcohol; and Resources and contacts.

**Evaluation:** The Guidelines are practical and comprehensive (323 pages), covering all levels of care, including inpatient care. The co-authors are recognised field leaders. The Guidelines are not NHMRC compliant but are based on best available evidence.
### 5.8.3 Brief intervention resource kits for Indigenous Australians with substance misuse

**Description:** Ten brief intervention kits, four for smoking, three for alcohol, and one each for (1) alcohol, smoking and other drugs, (2) alcohol and other drugs and smoking, and (3) alcohol nutrition and physical exercise, were identified mainly by the compilers directly contacting 74 health related organisations [141].

**Evaluation:** Using standard criteria for assessing quality of resource kits, only three out of the ten reviewed met all criteria [141]. None has been assessed for impact or outcome.


**Description:** This is a 131 page review of Volatile Substance Misuse (VSM), divided into three parts: VSM as a Problem; Interventions; From Interventions to Strategies. Effective intervention includes supply reduction (especially product modifications such as substituting petrol with Opal, a low-hydrocarbon vehicle fuel, community based programs, general interventions for substance abuse. A culturally adapted education aid has been developed by the Menzies School of Health Research in the form of a flipchart and poster, called Sniffing and the Brain.

**Evaluation:** The review is detailed and authoritative. It reports that none of the clinical interventions reviewed have been critically evaluated in relation to VSM in Indigenous people [123].

### 5.8.5 Closing the Gap Clearinghouse Resource Sheets for alcohol and tobacco misuse.

**Description:** Resource Sheet No. 3 Reducing alcohol and other drug related harm (Cat. No. IHW35) produced by the Clearinghouse (December 2010) is a succinct 10-page summary of interventions that work and do not work with drug misuse. Resource Sheet No. 4 Anti-tobacco programs for Aboriginal and Torres Strait Islander people (Cat. No. IHW37) summarises in 10 pages evidence concerning tobacco use interventions.

**Evaluation:** The Resource Sheets are drafted by field leaders supported by an expert reference group. No formal evaluation has been completed.

### 5.9 INDIGENOUS HEALTH RESEARCH

#### 5.9.1 The NHMRC road map: A strategic framework for improving Aboriginal and Torres Strait Islander health through research (2004)

**Description:** The Road Map was based on consultation with more than 250 people and 23 organisations and represents a framework for prioritising NHMRC-funded research. Six research themes were identified: 1) descriptive research into patterns of health risk, disease and death; 2) factors and processes that promote resilience and well-being; 3) health service research; 4) relationships between health status and gain and policy, and non-health programs; 5) research into previously under-researched ATSI populations; and 6) development of ATSI research capacity, especially work force. The Road Map was backed up by a commitment to allocate at least 5% of the overall research funding budget to ATSI research.

**Evaluation:** NHMRC funding for ATSI-related research reached the targeted 5% of total funding, but funding for individual ATSI researchers did not [142]. Feedback by written submissions and regional workshops was obtained and reported upon (Review of the NHMRC Road Map; 2009; Available at: [www.nhmrc.gov.au](http://www.nhmrc.gov.au)). Mental health was identified in both types of feedback as an under-funded priority. On the basis of this review, the Road Map II was approved in 2010 (Available at [www.nhmrc.gov.au](http://www.nhmrc.gov.au)). Despite feedback about mental health under-funding, focus was further shifted to physical health by changing the Road Map II objective to ‘close the gap between life expectancy of ATSI people and the overall Australian population’.

#### 5.9.2 NHMRC Values and ethics: Guidelines for ethical conduct in ATSI health research, 2003

**Description:** The 2003 Guidelines replaced a previous set issued in 1991, and were intended to supplement the National Statement of Ethical Conduct in Research Involving Humans. The 2003 Guidelines list six core values that research needed to demonstrate: spirit and integrity (meaning that research motivations must be based on respect for the richness and integrity of Indigenous cultural inheritance, and researchers actions demonstrate credibility in intent and process); reciprocity (meaning inclusion of ATSI people in equitable and respectful engagement, and benefit in terms of advancing the interests of ATSI people in ways valued by them); respect (meaning acknowledgement of the individual and collective contributions of ATSI people to the research, the affirmation of the right of...
ATSI people to have different values, and appreciation of the consequences of the research); equality (research will treat partners as equals, in terms of research processes used, interpretation with respect to ATSI knowledge and wisdom, and distribution of benefits); survival and protection (research should foster the solidarity of ATSI people, demonstrate a commitment to cultural distinctiveness, and oppose subjugation of ATSI values); and responsibility (research does no harm to ATSI people or values, and demonstrate processes of accountability to ATSI people and values). Procedurally, the Guidelines advise non-Aboriginal human research ethics committees (HRECs) to refer relevant research to an Aboriginal HREC (with a majority Aboriginal membership) for review, create an ATSI subcommittee or advisory group, or expand their membership to include ‘appropriate’ numbers of ATSI people.

**Evaluation:** Although the 1991 NHMRC Guidelines were at the time highly controversial for both Indigenous activists (who held the view that research funding should be controlled by Aboriginal organisations) and non-Indigenous academics (who felt the ethical procedures added undue burden and delay), most observers have subsequently concluded that the 1991 Guidelines were of crucial historical and practical importance [143]. Although the revised 2003 Guidelines essentially confirmed the procedural aspects of the original version and strengthened ATSI value frameworks, there was little contemporaneously expressed opposition. Subsequently, there have been reports of delays of years for commencement of national high-value research projects due to the number of ethics approvals required for research involving ATSI communities [144], or of complicated mental health research projects [145].
SUPPLEMENTARY REFERENCES


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INDIGENOUS HEALTH WORKER CONSULTATION AND CASE STUDY
Title: Best practice in early psychosis intervention for Australian Indigenous communities: Indigenous worker consultation and service model description

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Objective: Our aim was to identify promising elements of best practice relevant to mainstream mental health service (MHS) delivery of early psychosis intervention (EPI) to Indigenous communities. In a companion paper, a comprehensive literature review identified a promising service model with potential for delivering EPI: an Indigenous sub-team embedded within a mainstream health service. Method: This paper describes a consultation process (questionnaire, focus group, member checking) with Indigenous Mental Health Workers (IMHWs) in south eastern Queensland. A case study of the Sunshine Coast Cultural Healing Program (CHP-SC), deemed to be a best practice mainstream MHS for Indigenous people, was carried out during the consultation process. Results: IMHWs agreed that the Australian clinical guidelines for early psychosis were relevant to improving outcomes for Indigenous patients and their families. In the focus group IMHWs unanimously identified the CHP-SC as a best practice mainstream MHS suitable for delivering EPI. A case study of the CHP-SC, which represented an Indigenous sub-team model, found that it was associated with substantially improved engagement of Indigenous young people. Many activities of the CHP-SC were primary care linkage functions. Conclusions: We provisionally conclude that specialist EPI could be delivered by specialist Indigenous sub-teams (rather than specialist EPI teams) embedded in mainstream MHSs, that incorporate culturally safe practice and are fully integrated with Indigenous primary care services, and recommend that the model be formally evaluated.

Key Words: aboriginal, mental health, health services research, service model evaluation, schizophrenia.
INTRODUCTION

No attempt at cultural adaptation of early psychosis intervention (EPI) services for young Indigenous Australians has been published. This is the second of two papers that aim to identify promising elements of best practice relevant to mainstream mental health service (MHS) delivery of EPI to Indigenous communities. In the companion paper \(^1\) we reported a comprehensive literature review of MHS models for Indigenous Communities in Australia. Despite the limited number of published quantitative evaluations, we found three programs operating within mainstream health services that serve urban populations, which have high acceptability for and uptake by Indigenous people. One program was embedded in a mainstream general practice (the Indigenous sub-team of the Inala Community Health Centre). Another was embedded in a mainstream MHS (the Indigenous Team, Rural and Remote MHS, South Australia); and the third was embedded in a mainstream drug and alcohol service (the Way Out Program, Drug and Alcohol Council, SA). These services had a number of elements in common: 1) they were Indigenous sub-teams coordinated within a mainstream service; 2) they were comprised of a multidisciplinary team in which an Indigenous Mental Health Workers (IMHW) played a central and clinical role and; 3) these programs were strongly integrated into primary care and non-health Indigenous services.

In this paper we aimed to assess the elements of best practice EPI for Indigenous communities, firstly through IMHW consultation (questionnaire, focus group, and member checking via personal communication), and secondly, by carrying out a case study of a regional mental health program unanimously endorsed by IMHWs during the consultation process as a best practice mainstream MHS for Indigenous people.
METHODS

This qualitative study of best practice EPI for Indigenous communities was undertaken as part of an Australian National Health and Medical Research Council (NHMRC) strategic mental health research project called the NHMRC Clinical Practice Improvement Network for Early Psychosis (CPIN-EP)\(^2\). CPIN-EP was approved as a quality assurance project by Ethics Committees of the University of Queensland and of the MHSs participating in the quantitative evaluation. As we did not have approval from an Indigenous ethics committee, case file audits and the interviewing of Indigenous patients were not possible.

i) Indigenous Mental Health Worker (IMHW) consultation

We approached the Queensland Mental Health Unit Principal Policy Officer for Indigenous Mental Health, who in turn referred our project to the South Eastern Queensland Indigenous Mental Health (SEQIMH) Forum, one of two IMHW networks in that State. The SEQIMH Forum was attended by about 15 IMHW who worked in consultation-liaison roles within mainstream metropolitan and regional MHSs in South Eastern Queensland. Agreement to participate in a three-step consultation process was obtained after discussion of the CPIN-EP project at a regular SEQIMH Forum meeting. IMHWs were first individually mailed a 12-part questionnaire (the *IMHW Early Psychosis CPG Questionnaire*; available on request), each section dealing with one of the 12 guidelines in the first edition of the *Australian Clinical Guidelines for Early Psychosis*\(^5\). Sections contained questions asking IMHWs whether the guideline had been adopted by their MHS, what were the implementation barriers and how these were being addressed, and how relevant the guideline was to improving the treatment of Indigenous patients. Seven of the 15 IMHW attending the SEQIMH Forum returned completed questionnaires. The second part in the consultation was a Focus Group\(^6\), the purpose of which was to obtain IMHW views on how best to provide EPI services for
young Indigenous Australians. Focus Group methodology was selected because it is considered culturally appropriate \(^7\) and has the potential advantage of explicit use of group interaction to generate data and insights that would be unlikely to emerge without that interaction \(^8\). The Focus Group was held at a venue nominated by the IMHW’s (the Academic Department of Psychiatry at the Royal Brisbane and Women’s Hospital). The Group started last 2.5 hours. A sitting fee of $200 was paid to each of the ten IMHW participants. Four CPIN-EP project staff attended, three as note takers and one in the role of group moderator (AF). The pre-prepared questioning route was: *Opening Question* (after the purpose of the group was described, each member was asked to comment); *Key Question (1)*: What were the mainstream service barriers for Indigenous people with early psychosis? (after the corresponding Questionnaire results were presented); *Key Question (2)*: How could mainstream service barriers be addressed? (after the corresponding Questionnaire results were presented); *Key Question (3)*: How could inpatient stays be made more tolerable? *Creative Question*: What would you do if Government gave you unlimited funding to improve MHSs for Indigenous people? (invitation to imagine how to make things different); and the *Closing Question*: Could you nominate a best practice health service of any type for Indigenous people anywhere in Australia? A note-based thematic analysis was performed (see pp118-122 \(^6\)), allowing progressive sorting of verbatim quotes and recorded issues into topics and subtopics, which were then summarised and tabulated. A specific outcome of the Focus Group was the unanimous endorsement of the Sunshine Coast – Wide Bay Health Service District Cultural Healing Program (CHP-SC) as a best practice model.

In accordance with an agreement between the CPIN-EP project and the participating IMHW, the CPIN-EP team drafted a summary of the results of the pre-Focus Group *Questionnaire*; the Focus Group; and any materials designed, which included a mainstream MHS Indigenous
Service Self-Review and a proposed set of Indigenous File Audit Indicators (available on request), and presented these items to the full membership of the SEQIMH.

ii) Case study of the Sunshine Coast – Wide Bay Health Service District (SC) Cultural Healing Program (CHP-SC)

Case study methodology 9-11 was used to examine the CHP-SC, deemed to be a prototype or pragmatic case of best practice 12. At the Focus Group our team was invited by the CHP-SC IMHW to do the case study. Six weeks later three CPIN-EP members visited the Nambour Community Mental Health Centre (CMHC) where the CHP-SC was based. The one-day site visit consisted of inspecting the CHP-SC office workplace, reviewing copies of the Program documentation, speaking to members of the CHP-SC team individually and as a group, and speaking informally to non-CHP-SC staff members at the CMHC. As well, data on the numbers of patients attending the CHP-SC were collected. A Program Description drafted by CPIN-EP staff, along with other materials designed to audit the treatment of Indigenous EP patients attending mainstream MHSs (available on request), were tabled at the next SEQIMH Forum. Additional information was obtained by follow-up phone calls directly from CHP-SC staff. Resource limitations prevented multiple site visits and a more detailed examination of the day to day operations of the CHP, or soliciting the opinions of the District Hospital staff or staff in the regional Aboriginal Controlled Health Service (ACHS). No Indigenous patients attending the CHP-SC were interviewed and their medical records were not audited as we did not have Indigenous ethics committee approval.
RESULTS

Results are divided into two sections, one reporting on the IMHW consultation process and the other describing the findings from the CHP-SC case study.

i) IMHW Consultation

The sample of IMHWs consulted had an average of 3.5 years’ experience in that role (range 1-7 years) and reported that they saw on average four Indigenous early psychosis patients annually. They all worked in metropolitan or regional mainstream MHSs.

a) IMHW Early Psychosis CPG Questionnaire

Almost all IMHW agreed that the 12 early psychosis clinical practice guidelines (CPGs) were being adopted by their employing MHS and that each CPG was relevant to improving outcomes for Indigenous patients and their families. Barriers to implementing the CPG were general service issues that might also apply to non-Indigenous patients (e.g. service access, clinician training, limited staff numbers, long waiting times for doctor’s appointments, patient cooperation); issues that affect rural and remote communities generally; whilst others were mainly relevant to Indigenous communities (see Table). In regard to ways of addressing barriers to CPG implementation, key themes were: 1) making mainstream MHSs culturally safe for Indigenous patients, which included enhancing the clinical role of the IMHW and the training of non-Indigenous staff in cultural awareness; 2) greatly improving linkage and communication between the mainstream MHSs, Indigenous primary care practitioners, and Indigenous communities generally; and 3) improving Indigenous community mental health literacy. That is, mainstream MHSs needed to become “Indigenised” and directly connected with primary care settings, and vastly improve their communication with the Indigenous communities they serve.
b) The IMHW Focus Group

The Focus Group format appeared to be highly effective in eliciting relevant material and engaging all participants in the group process. Although the purpose of the Group was to identify elements of best practice for EPI in Indigenous communities, a significant amount of the Focus Group discussion concerned the IMHWs frustration with the IMHW role as implemented in Queensland; the Government’s shortcomings in addressing unmet mental health service needs of Indigenous people; and, the Government’s failure to listen and act on the views of communities despite never-ending consultative processes. Discussion also focused on mainstream MHSs lacking in cultural safety. IMHWs felt that they were subjected to racism especially in large urban hospitals where they encountered either frank rudeness from non-Indigenous health practitioners, including the use of pejorative terms (such as ‘Blacks’ or ‘Abos’), or gross ignorance or dismissiveness of cultural issues on the part of non-Indigenous clinicians in their dealings with Indigenous patients. IMHW described the fears of patients that made it essential to include the IMHW in the initial service intake and engagement stage, and to keep the IMHW involved throughout the episode of care.

The IMHW Group were particularly critical of a single IMHW having to work with a large number (e.g. 20) of non-Indigenous doctors and case managers, rather than a few within a multi-disciplinary team. This distributed model was considered particularly undesirable when non-Indigenous clinicians (e.g. psychiatric registrars) were rotated to work with different IMHW, threatening continuity of care. Reinforcing the perceived need for a team approach, was the Group’s criticism of individual IMHWs servicing large catchment areas, rather than specified communities with which they could build trusting relationships.
As the IMHW Focus Group progressed, themes related to addressing treatment barriers began to emerge. Placing the IMHW in a truly collaborative role on an equal footing with clinicians, and providing IMHW with cultural supervision from Indigenous Elders would begin to redress the limiting aspects of the current IMHW role. The same IMHW being involved from the point of initial engagement during mainstream MHSs intake and at all subsequent stages of treatment through to transfer of care was the ideal model of engagement, suggesting the IMHW should formally hold a clinical case manager role. Mainstream MHSs having their Indigenous outreach function comprehensively integrated into primary care was seen as an essential ingredient for early case detection and Indigenous engagement with mainstream MHSs. This integration needed to be coupled with MHS willingness to collaborate with the full spectrum of Indigenous social services, and willingness for MHS staff to address non-mental health needs (e.g. dental care, unemployment, or judicial needs), even when a mental health issue is not the presenting problem, though it is often an underlying problem. Also critical to overcoming barriers to Indigenous access to mainstream MHS, was the need for these services to be culturally safe: non-Indigenous staff receiving effective cultural awareness training (“for four days not four hours”); making mainstream MHS facilities, especially inpatient hospital wards more Indigenous-friendly and avoiding locked environments (“Bring the culture into the hospital”); and for Indigenous staff to be “at the front desk”. Of particular relevance to EPI, IMHW recommend a specific youth focus. Accountability of the mainstream MHS should be to the Indigenous community to provide services agreed upon at Indigenous Community Health Forums. Toward the end of the Focus Group, and in response to the Creative and Closing Questions, the IMHW were unanimous in endorsing the Cultural Healing Program on the Sunshine Coast”, as a best practice model that should be rolled out across the state if resources
permitted. When the note-based thematic analysis of questionnaire responses and focus group discussion was presented to the full membership of the SEQIMH Forum, as a member checking procedure, it created strong interest, was enthusiastically endorsed as an accurate representation of the views of the SEQIMH membership as a whole, and no revisions or additions were requested.

ii) **Case study of the Sunshine Coast Cultural Healing Program (CHP-SC)**

By invitation, a site visit to the Sunshine Coast Cultural Healing Program (CHP-SC) was carried out on 1 October 2004. The site visit resulted in the following program description.

1. **History of the CHP-SC**

Following the release of the *Queensland Mental Health Policy Statement: Aboriginal and Torres Strait Islander People* (1996), a number of IMHW positions were funded across the State. In 2000 the first IMHW position funded in the Sunshine Coast Area Health Service was placed in isolation from the MHS, within the generalist Indigenous Health Service. This model was deemed unsatisfactory and in 2002 an IMHW position was established in the mainstream community MHS in Nambour. This IMHW, Mr Geoff Kenny (GK), had had extensive experience with Indigenous health and drug and alcohol services in the Northern Territory. The role initially was based on how most Queensland MHSs were deployed, the IMHW being invited to assist with Indigenous clients being case managed by non-Indigenous clinicians. This role model was also deemed unsuccessful in improving engagement, and GK concluded that he had to be much more involved with clients, and that this was only possible if he himself was the case manager or if he was a member of a multi-disciplinary team providing team-based case management targeted to Indigenous clients. Around the time an Indigenous team model was being initiated, GK was killed in a motor vehicle accident. A
non-Indigenous Team Coordinator, Ms Jennifer McClay (JMcC), a consultant nurse who had been working directly with GK, then took over the development of the Indigenous team model envisaged by GK. This program was re-named the Cultural Healing Program (CHP) to convey a broader and holistic service model. In 2003, the CHP-SC was commenced with the employment of Mr Travis Shorey (TS), an IMHW with a degree in Indigenous Primary Health care, who in collaboration with JMcC made major contributions to the final design, development and implementation of the Program (2003-2008).

2. Program Setting

The Sunshine Coast Health Service District (SCHSD) has a catchment area of 8,800 square kilometres and a catchment population of about 250,000 people. It is a semi-rural sub-tropical region north of Brisbane, which includes small rural service towns (e.g. Nambour) and seaside residential centres (e.g. Maroochydore and Noosa). The District has an Indigenous population of at least 3,500. The CHP-SC services the southern part of the District (excluding the large town of Gympie) an area of about 3,000 square kilometres but including most Indigenous people in the District catchment area.

In 2004 CHP-SC was a multidisciplinary team with one part time and two full-time positions (one of the full-time positions was the IMHW) that was embedded in the Adult MHS, from which it received administrative support, and physically located in the Nambour Community Mental Health Centre. Functionally it sat beside other MHS components such as the Acute Care Team, the hospital-based Mental Health Assessment Team (MHAT), Continuing Care Team (CCT), Aged Care Team, and the Child and Youth Mental Health Team, though other teams may have been based at other District locations. The MHAT and ACT provided 24-
hour emergency assessment. The CHP-SC accepted Indigenous clients directly or after assessment by the assessment team or aged care team following hospital admission.

3. Program procedures

Formally, the CHP-SC operated mainly during business hours, having limited after hours capacity, but informally team members accepted out-of-hours calls on their mobile phones. Only clients over the age of 17 years were accepted by the CHP-SC. Those under 17 needing access to a MHS were referred to CYMHS and supported by the CHP-SC as necessary. The CHP-SC had a low threshold for referral accepting people deemed simply “at risk”. Clients did not need to reach formal MHS diagnostic criteria to be eligible for case management. As a result the CHP-SC was viewed very positively by other MHS teams because they accepted new Indigenous referrals willingly with few exclusion criteria. These procedures also facilitated the preventative and primary health care aspects of the CHP-SC, which were considered central to its philosophy. When a new client was seen by the CHP-SC the client was registered on the Service clinical information system, but a file number was not raised until after triage and the appointment of a case manager was deemed necessary. The CHP-SC triage procedure was extensive and could involve multiple interventions including referral for dental or eye care, and linkage with social security (e.g. Centrelink) and family services. Care was taken with initial contacts to ensure that there was an appropriate match between client and case manager “mob” affiliations. By having such an elaborate triage procedure, formal ‘open’ case loads could be kept to about 25 clients at any one time, whilst allowing the CHP-SC to triage and assist many Indigenous clients who were not registered as open cases. No information was collected by written questionnaires due to low literacy rates. Cognitive testing was rarely performed. CHP-SC clients could ask for a Cultural Consultant in addition to the CHP-SC IMHW. The CHP-SC emphasised the need for ease-of-access to its staff by
clients: mobile phone text messaging was becoming a major avenue for clients calling for informal assistance.

The CHP-SC Team Coordinator (a Clinical Nurse Consultant) was nominally the primary case manager for all clients. Psychiatrist/medical support was via sessional clinics by a CCT doctor, or in urgent cases the ACT Consultant or Registrar. Importantly, the same psychiatrist and registrar saw all CHP-SC patients. A clinical psychologist who worked in a part-time capacity (0.5 FTE) was the third CHP-SC team member, who mainly did case management work. Most of the CHP-SC therapeutic work was un-structured with a strong emphasis on client engagement. Structured interventions, such as Cognitive-Behaviour Therapy, were not used. The same medication prescribing practices used with non-Indigenous patients were used with CHP-SC patients. Case management was team-based necessitating regular intensive team reviews of cases by all team members, and detailed hand-overs to the CCT if a CHP-SC client was likely to present out-of-hours. However team-based processes obviated the need for Indigenous clients to be repeatedly assessed by different clinicians and telling and re-telling ‘their stories’ to which they are positively averse.

The CHP-SC staff were heavily involved in primary care settings. Most CHP-SC clients are managed collaboratively with the local ACCHS (North Coast Aboriginal Corporation for Community Health: NCACCH). NCACCH was responsible for Indigenous welfare services in general (not just health care) and acted as a brokerage to health service providers. For instance, NCACCH funded private fee-for-service GP and dentist visits. CHP-SC clients were often co-managed with the NCACCH, NCACCH funding private psychological counselling when this was required.
The CHP-SC was strongly focused on building community awareness of the Program via partnerships with both government (Centrelink, Department of Education, Employment and Training, Youth Justice, Child Safety, Community Health, etc.) and non-government organisations (Sunshine Coast Indigenous Networking Group, ATSI Legal Services, Police Youth Centre, Standby Suicide Prevention Network, the Najidah Women’s Refuge, WHOS [We Help OurSelves] Support Group etc.). The CHP-SC conducted health promotion workshops at high schools and sat on many local Indigenous committees (e.g. the Aboriginal Student Support and Parent Awareness Program, National Aboriginal and Islander Day Observance Committee etc.). The IMHW played the central role in liaison with Indigenous community groups.

The CHP-SC identified a key need for professional development of both the IMHW and non-Indigenous clinicians. In particular, both cultural and clinical supervision was found to be essential. Cultural supervision of the IMHW was provided by local Indigenous Elders; cultural supervision of non-Indigenous clinicians was provided by the IMHW. The CHP-SC also supported cultural awareness beyond its Program, especially in the Emergency Department, the Hospital psychiatric wards, and the broader Community MHS.

4. Program evaluation

No formal health outcome measurement was carried out by the CHP-SC up to the time of drafting this program description. Quantitative evaluation was restricted to administrative service data on the number of Indigenous clients entering the Program, the number of Occasions of service delivered, and basic demographic characteristics of the client. Qualitative evaluation was based on observations made during a site visit.
Data on the number of clients, persons receiving formal case management from June 2002 (when GK was first employed) until August 2002 (when the CHP-SC was commenced) and from then until March 2004 (when the CPIN-EP project assessed the CHP-SC) are presented in Figures. Figure 1 shows quantities of service provision (as the number of occasions of service) related to client intake and assessment. These data evidence the total number of Indigenous clients referred and in receipt of the elaborate triage services, including but not limited to those entering formal case management. Inspection of Figure 1 reveals that in 2004 about 200 Indigenous clients were referred to CHP-SC – representing 5.7% of the local Indigenous community of 3500 people.

Figure 2 presents the distribution of CHP-SC clients by age and gender. Of relevance to EPI these data show that patients in the 16-20 year and 21-25 year age range are well represented. Of particular interest, male clients outnumber female clients. Supporting the relevance of the CHP-SC as a best practice service model for EPI is the proportion of clients with the diagnosis of psychotic disorder – 14% of clients received an ICD Diagnosis of F20 – F29: Schizophrenia, Schizotypal or Delusional Disorder.

The qualitative assessment of the CHP-SC made by the CPIN-EP project during the one-day site visit was mainly focused on obtaining a program description and reviewing the data presented above. However, additional informal observations were made. The IMHW (TS) was highly knowledgeable about Indigenous program and community development issues, not just mental health practice. The Team Coordinator (JMcC) was an experienced manager who had been with the MHS for many years. The clinical psychologist was also experienced and committed to the development of the CHP-SC. The relationships of the CHP-SC staff with the broader MHS staff body seemed in the main to be very positive and collegial, and
the profile of the program was well-known. A number of senior MHS managers had played important roles in fostering the CHP-SC, and the psychiatrist providing medical input was also very dedicated to its clients. Overall, the CHP-SC staff were very experienced senior staff who were well respected by the broader MHS. The physical area in which the CHP-SC were housed was basic office space without adornment, with most consultations occurring in other community settings. Program leaflets and flyers were basic and unremarkable, consistent with community promotion of the CHP-SC being predominantly by personal contact with its staff.
DISCUSSION

This qualitative study, in conjunction with a literature review in the companion paper, represents the most comprehensive examination of best practice for delivery of EPI to Indigenous communities in Australia to be reported in the scientific literature to date. The methodological approach to assessing best practice was to look for triangulated points of convergence across descriptions in the published and unpublished literature, the opinions of IMHWs, and program features observed in our case study of the CHP-SC. As there is a dearth of literature about EPI for Indigenous people, a broad approach was taken to our examination of best practice, which encompassed much of the mental health and drug and alcohol fields. Therefore, we believe our findings have relevance to mental health and addiction services generally. The main result of our examination is that Indigenous sub-teams embedded within mainstream MHS contexts, which service all Indigenous mental health presentations including early psychosis patients, may be a best practice service model. The effectiveness of this model appears to reside in its capacity to be tightly integrated into Indigenous primary care and other community-based social service settings, and to support culturally safe practice.

The Focus Group methodology used in the consultation process to elicit IMHW views appeared to be culturally appropriate and efficient in identifying many key issues related to mainstream MHSs for Indigenous people. Despite restricting our Focus Group methodology to one group session only, we appeared to reach a ‘saturation’ point where no new themes were emerging. The opinions of the IMHW who attended the Focus Group were representative of the larger membership of IMHW working in mainstream MHSs. Indeed, the Focus Group discussions about best practice were on the whole, in line with commentary in
the literature (e.g. 13, 14) as well as the specific recommendations about what works to overcome Indigenous disadvantage, reported by the Closing the Gap Clearing house 15, 16. There appears to be a broad range of barriers to be overcome if mainstream MHSs are to fulfil their service obligations to Indigenous communities. Consistent with our interpretation of the literature, the opinions of IMHWs were that these barriers could mostly readily be addressed by mainstream MHSs creating Indigenous-specific sub-teams coordinated within the broader service.

To complete the triangulation of sources of data, a case study of the CHP-SC was carried out. Convergent with the literature review and IMHW opinion, the CHP-SC represented an Indigenous sub-team coordinated within a mainstream MHS. Administrative data showed that introduction of this service model was associated with substantially higher rates of engagement and service provision, to both male and female young adult Indigenous people, many presenting with first episode psychosis. The effectiveness of this model appeared to rely on a team-based and strongly supported IMHW role, elaborate integration of the mainstream MHS Indigenous function into primary health and other community service settings, and emphasis on cultural sensitivity and awareness. Some of these features have been earlier reported to be effective in an inner city MHS 17.

The value of a case study is that it produces context-dependent knowledge and experience, and if enough detail is obtained over time it can be highly reliable 11. Via the IMHW Focus Group, the CHP-SC was deemed a paradigmatic case that exemplified the general characteristics of best practice – that is, it had prototypical value 12. The limitations of our case study included: not making more than one site visit; not observing day to day operations; not broadly enough canvassing non-program staff opinion; and not interviewing Indigenous
patients attending the program or auditing their medical records. The major strength was collection of time series data pre- and post-implementation of the CHP-SC. Nonetheless, as with the interpretation of the literature review, our conclusions must be viewed as preliminary until a future formal evaluation is completed.

However, we recommend as we have others that in a field with such gross disparity, that gaps in the evidence should not impede program development and implementation, but instead emphasise the importance of “ongoing learning loops” (p.6 15). EPI is simply a patient safety intervention directed at the service delivery system. “In practice” evaluation is indicated, as is staged implementation for any multicomponent program involving readiness of trained staff. Well suited to this situation is the stepped-wedge study design in which the service intervention (e.g. the Indigenous sub-team) is rolled-out sequentially across multiple sites so that at evaluation end all services will have implemented the intervention 18. Six-month outcome data collection periods occur pre-intervention and post-intervention, those sites implementing the program earlier having fewer pre-implementation (baseline) and more post-implementation data collections (assessing continuity or sustainability of effect) whilst those sites implementing the program later having more pre-implementation (assessing historical trends unrelated to the intervention). The stepped wedge is a self-replicating interrupted time series design, a robust alternative to randomised designs when the latter are not feasible.

In comparing service models (Indigenous sub-team versus the specialist EPI team) there are also a number of practical considerations to consider. For the Indigenous sub-team to optimally deliver EPI, the close collaboration or input of the EPI team or clinician would seem beneficial, if the MHS has such specialist expertise. The alternate model, a specialist EPI team with IMHW input, we suggest may have constraints because resource limitations
might dictate the IMHW input to a specialist EPI team be outsourced (not provided by a member of the EPI team) given the low number of new cases of Indigenous first episode psychosis seen by a single EPI team. Other possible disadvantages of a specialist EPI team for Indigenous clients are insufficient capacity to provide high levels of integration with Indigenous primary care and communities (as almost all EPI patients will be non-Indigenous) and insufficiently strong focus on cultural safety. Both of these features that seem essential for client engagement are integral to Indigenous sub-teams. We suggest these practical points further reinforce the potential value of the Indigenous sub-team as a best practice model for delivering EPI.

In conclusion, we found preliminary but convergent evidence that an Indigenous sub-team coordinated within mainstream MHSs delivering general mental health services to specified Indigenous communities, and which is tightly integrated into Indigenous primary care and other community-based social services, represents a best practice service model for EPI provision to Indigenous people. We recommend that this service model be urgently subjected to formal evaluation.
REFERENCES


Acknowledgement:

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### Table: Themes that emerged from questionnaire responses and focus group discussion

<table>
<thead>
<tr>
<th>BARRIERS TO BEST PRACTICE EPI</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Restricted access to mainstream MHSs</strong></td>
<td>Long distances to clinics and limited transport options; limited out-of-hours services; MHS use of restructive age or diagnostic criteria; high threshold for MHS entry and case management; inflexible and “unresponsive” service delivery-MHS will not help with “social” problems, only clinical ones;</td>
</tr>
<tr>
<td><strong>Poor linkage between MHS and Indigenous primary care</strong></td>
<td>“Unwillingness” of MHS to integrate with Indigenous primary care; little communication between MHS and Indigenous primary care; poorly developed referral pathways; no involvement of MHS in upskilling Indigenous health practitioners.</td>
</tr>
<tr>
<td><strong>Low community engagement by MHS</strong></td>
<td>Lack of “presence” or “visibility” of MHS staff in Indigenous communities; lack of collaboration between MHS and Indigenous social services/agencies; failure of MHS to involve itself in non-clinical but social risk factors at community level gives impression of unwillingness to be helpful; MHS unresonsiveness to Indigenous community concerns such as youth “chroming”; little MHS connection or respect for community leaders, or interest in their advice; lack of MHS promotion.</td>
</tr>
<tr>
<td><strong>Low Indigenous mental health literacy</strong></td>
<td>Insufficient community education by MHS about the psychoses and its risk factors; families feel “shame” and stigma if affected by psychosis; little appreciation of long-term nature of the treatments and the relapsing nature of brain diseases.</td>
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<tr>
<td><strong>Fear and distrust of mainstream MHS</strong></td>
<td>Fear of government “institutions” generally; hospital equated with institution which may be associated with past forced “mission placements”; hospitals experienced as a “prison with four walls”; clinicians may be suspected of having played a past role in “forced placements”; a “bad experience” MHS by one Indigenous person is widely discussed at a community level, putting the entire community off the MHS; delayed and sicker presentations reinforce negative outcomes such as involuntary “forced” treatment; medication may be perceived as “white man’s poison”, especially if injected; medication can be feared for taking the “blackness out of them”.</td>
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<tr>
<td><strong>Complexity of Indigenous presentations</strong></td>
<td>High rates of comorobidity, itinerancy, trauma, and family breakdown; substance use disorders often mask a primary psychotic disorder; assessment problems related to communication problems.</td>
</tr>
<tr>
<td><strong>Problems with continuity of care</strong></td>
<td>Unwillingness to monitor “at risk” cases; MHS staff rotations and low staff retention rates; little coordination</td>
</tr>
<tr>
<td>Issue</td>
<td>Description</td>
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<tr>
<td>Poor engagement of families</td>
<td>Mainstream MHS may be geographically distant from where the Indigenous family lives; preferences for Indigenous families to meet away from the facilities of mainstream MHSs; poor communication between MHSs and families; inflexibility and timing and direction of family appointments, and inclusion of members of the extended family; little access to registrar of psychiatrist.</td>
</tr>
<tr>
<td>Poor rapport with Indigenous patients</td>
<td>The language of “White Psychiatry: can be a barrier to rapport for Indigenous patients, who will say “yes” to questions they do not fully understand; unwillingness of non-Indigenous clinicians to share their cultural background compared to willingness of the IMHW to share their “story” and identify their “mob”; assumption that the person can speak English fluently or read.</td>
</tr>
<tr>
<td>Inconsiderate or unengaging MHS procedures</td>
<td>Lack of patient choice between having an Indigenous or non-Indigenous case worker; age and gender mismatching between case manager and patient; problems with attending therapy groups because often no other Indigenous patient is present; lack of culturally appropriate psychoeducational materials and false assumption the patient can read and write.</td>
</tr>
<tr>
<td>Discriminating or culturally insensitive non-Indigenous MHS practitioners</td>
<td>Culturally insensitive non-Indigenous health practitioners; lack of “cultural safety”, and even racism especially in large urban hospitals where non-Indigenous practitioners may be dismissive or ignorant of cultural issues; minimalistic cultural training; lack of appreciation of Indigenous lifestyle or cultural influences on presentation; use of jargon; lack of appreciation of Indigenous confidentiality issues – sometimes non-Indigenous worker preferred over an IMHW from the same “mob” as the patient.</td>
</tr>
<tr>
<td>Disrespect for IMHW role</td>
<td>IMHW involvement in multidisciplinary care is tokenistic and their work often not acknowledged or value by non-Indigenous clinicians. Non-clinical role of IMHW creates a power inequality between the IMHW “technician” and the non-Indigenous health “professional”; limited training opportunities for IMHW; restrictions on their practice, i.e. cannot case manage, or perform home visits without a health professional; IMHW often not called upon at critical times, e.g. at intake or care planning meetings.</td>
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Figure Legend:

Figure 1. Rate of client assessment and intake for the Cultural Healing Program
Sunshine Coast 2002-2005

Figure 2. Age and sex distribution of all clients seen by the Cultural Healing Program
Sunshine Coast 2002-2005
FIGURE 1.
FIGURE 2.
Best practice in early psychosis intervention for Australian indigenous communities: indigenous worker consultation and service model description
Stanley Catts, Brian O’Toole, Amanda Neil, Meredith Harris, Aaron Frost, Kathy Eadie, Russell Evans, Belinda Crissman, Jennifer McClay and Travis Shorey
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The online version of this article can be found at:
http://apy.sagepub.com/content/21/3/249
No attempt at cultural adaptation of early psychosis intervention (EPI) services for young Indigenous Australians has been published. This is the second of two papers that aim to identify best practice in early psychosis intervention for Australian indigenous communities: indigenous worker consultation and service model description.

Abstract

Objective: The aim of this study was to identify promising elements of best practice relevant to mainstream mental health service (MHS) delivery of early psychosis intervention (EPI) to Indigenous communities. In a companion paper, a comprehensive literature review identified a promising service model with potential for delivering EPI: an Indigenous sub-team embedded within a mainstream health service.

Method: This paper describes a consultation process with Indigenous Mental Health Workers (IMHWs) in south eastern Queensland. A case study of the Sunshine Coast Cultural Healing Program (CHP-SC) was carried out during the consultation process.

Results: IMHWs agreed that the Australian clinical guidelines for early psychosis were relevant to improving outcomes for Indigenous patients. IMHWs unanimously identified the CHP-SC as a best practice mainstream MHS for delivering EPI. The CHP-SC, which represented an Indigenous sub-team model, was found to be associated with substantially improved engagement of Indigenous young people.

Conclusions: We provisionally conclude that specialist EPI could be delivered by specialist Indigenous sub-teams (rather than specialist EPI teams) embedded in mainstream MHSs that incorporate culturally safe practice and are fully integrated with Indigenous primary care services, and recommend that the model be formally evaluated.

Keywords: Aboriginal, health services research, mental health, schizophrenia, service model evaluation

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promising elements of best practice relevant to mainstream mental health service (MHS) delivery of EPI to Indigenous communities. In the companion paper, we reported a comprehensive literature review of MHS models for Indigenous Communities in Australia. We found three programs that have high acceptability and uptake by Indigenous people. One program was embedded in a mainstream general practice (the Indigenous sub-team of the Inala Community Health Centre). Another was embedded in a mainstream MHS (the Indigenous Team, Rural and Remote MHS, South Australia); and the third was embedded in a mainstream drug and alcohol service (the Way Out Program, Drug and Alcohol Council, South Australia). These services were Indigenous-specific, comprising a multidisciplinary team, in which Indigenous Mental Health Workers (IMHWs) played a central and clinical role, and were strongly integrated into primary care and non-health Indigenous services.

In this paper we aimed to assess the elements of best practice EPI for Indigenous communities, firstly through IMHW consultation (questionnaire, focus group, and member checking via personal communication), and secondly, by carrying out a case study of a regional mental health program unanimously endorsed by IMHWs during the consultation process as a best practice mainstream MHS for Indigenous people.

Methods

This study was undertaken as part of the National health and Medical Research Council (NHMRC) Clinical Practice Improvement Network for Early Psychosis (CPIN-EP), approved as a quality assurance project by the Ethics Committee of the University of Queensland. As we did not have approval from an Indigenous ethics committee, case file audits and interviewing of Indigenous patients were not possible. Rather, we obtained the agreement of the South Eastern Queensland Indigenous Mental Health (SEQIMH) Forum, one of two IMHW networks in that State, to participate in a three-step consultation process. IMHWs were first individually mailed a 12-part questionnaire (the IMHW early psychosis clinical practice guideline (CPG) questionnaire: available on request to the corresponding author), each section dealing with one of the 12 guidelines in the first edition of the Australian clinical guidelines for early psychosis. Seven of the 15 IMHWs who attended the SEQIMH Forum returned completed questionnaires. The second part in the consultation used a standard focus group methodology, the purpose of the group being to obtain IMHW views on how best to provide EPI services for young Indigenous Australians. A note-based thematic analysis was performed (see pp.118–122), allowing progressive sorting of verbatim quotes and recorded issues into topics and subtopics. A specific outcome of the focus group was the unanimous endorsement of the Sunshine Coast Cultural Healing Program (CHP-SC) as a best practice model. Case study methodology was used to examine the CHP-SC, deemed to be a prototype or pragmatic case of best practice. A one-day site visit consisted of inspecting the CHP-SC office workplace, reviewing copies of the CHP-SC documentation, speaking to members of the CHP-SC team individually and as a group, and speaking informally to non-CHP-SC staff members at the Community Mental Health Centre. Data on the numbers of patients attending the CHP-SC were collected as well. A full description of these methods is available at www.clearthinking.com.au.

Results

The results are presented in two parts: the IMHW consultation, and the case study.

The IMHW consultation

The sample of IMHWs consulted had an average of 3.5 years’ experience in that role (range 1–7 years), saw on average four Indigenous early psychosis patients annually, and worked in metropolitan or regional mainstream MHSs.

IMHW early psychosis CPG questionnaire

IMHW agreed that the Early Psychosis CPGs were relevant to improving outcomes for Indigenous patients and their families. Barriers to implementing the CPG were general service issues that might also apply to non-Indigenous patients (e.g. service access, clinician training, limited staff numbers, long waiting times for doctor’s appointments, patient cooperation) and these were issues that affect rural and remote communities generally, whilst other issues were mainly relevant to Indigenous communities.

The IMHW focus group

The focus group format appeared to be effective in eliciting relevant material and engaging all participants in the group process. A significant amount of the focus group discussion concerned the frustration of IMHWs with the IMHW role as implemented in Queensland; the unmet mental health service needs of Indigenous people; the Government’s failure to listen and act on the views of communities despite never-ending consultative processes; and the lack of cultural safety in mainstream MHSs. IMHWs felt that they were subjected to racism, especially in large urban hospitals. As the Group progressed, themes related to addressing treatment barriers emerged. Placing the IMHW in a truly collaborative role on an equal footing with clinicians, and providing IMHW with cultural supervision from Indigenous Elders may begin to redress the limiting aspects of the current IMHW role. The same IMHW being involved from the point of initial engagement during mainstream MHSs intake and at all subsequent stages of treatment through to transfer of care was the ideal model of engagement,
suggesting the IMHW should formally hold a clinical case manager role. Mainstream MHSs having their Indigenous outreach function comprehensively integrated into primary care and other community services was seen as an essential ingredient for early case detection and Indigenous engagement with mainstream MHSs. Toward the end of the focus group, the IMHW unanimously endorsed the CHP-SC as a best practice model. When the note-based thematic analysis of questionnaire responses and focus group discussion was presented to the full membership of the SEQIMH Forum, as a member-checking procedure, it created strong interest, was enthusiastically endorsed as an accurate representation of the views of the SEQIMH membership as a whole, and no revisions or additions were requested.

Case study of the CHP-SC

By invitation, a site visit to the CHP-SC was carried out on 1 October 2004. The Sunshine Coast Health Service District (SCHSD) has a catchment area of 8800 km² and a catchment population of about 250,000 people. It is a semi-rural sub-tropical region north of Brisbane with an Indigenous population of at least 3500 people. In 2004, the CHP-SC was a multidisciplinary team with one part time and two full-time positions (one of the full-time positions was the IMHW) that was embedded in the Adult MHS, from which it received administrative support. It was physically located in the Nambour Community Mental Health Centre. The CHP-SC operated during business hours. Only clients over the age of 17 years were accepted by the CHP-SC, those under 17 years were referred to youth services and supported by the CHP-SC as necessary. The CHP-SC had a low threshold for referral and clients did not need to reach formal MHS diagnostic criteria to be eligible for case management. The CHP-SC Team Coordinator (a Clinical Nurse Consultant) was nominally the primary case manager for all clients. Psychiatrist/medical support was provided via sessional clinics. The same psychiatrist and registrar saw all CHP-SC patients using standard medication practices. A clinical psychologist (0.5 full-time equivalent (FTE)) mainly did case management work. Most of the CHP-SC therapeutic work was unstructured with a strong emphasis on client engagement. Case management was team-based, reducing the need for Indigenous clients to be repeatedly assessed by different clinicians. The CHP-SC staff were heavily involved in primary care settings. Most CHP-SC clients were managed collaboratively with the local Aboriginal Community Controlled Health Service. The CHP-SC built community awareness of the Program via partnerships with government (e.g. Centrelink) and non-government organizations (e.g. Aboriginal and Torres Strait Islander Legal Service). The CHP-SC identified a key need for professional development of the IMHW and non-Indigenous clinicians. Both cultural and clinical supervision was found to be essential. Cultural supervision of non-Indigenous clinicians was provided by the IMHW. The CHP-SC supported cultural awareness beyond the program, especially in the hospital psychiatric wards and the broader community MHS.

Quantitative evaluation was restricted to administrative service data on the number of Indigenous clients entering the CHP-SC, the number of occasions of service delivered, and basic demographic characteristics of the client. Data on the number of clients, persons receiving formal case management from June 2002 (when the first IMHW was employed) until August 2002 (when the CHP-SC was commenced) and from then until March 2004 (when the CPIN-EP project assessed the CHP-SC) are presented in Figure 1. This figure shows quantities of service provision (as the number of occasions of service) related to client intake and assessment. These data evidence the total number of Indigenous clients referred and in receipt of the elaborate triage services, including but not limited to those entering formal case management. Inspection of Figure 1 reveals that in 2004 about 200 Indigenous clients were referred to CHP-SC, representing 5.7% of the local Indigenous community of 3500 people.
Figure 2 presents the distribution of CHP-SC clients by age and gender. Of relevance to EPI these data show that patients in the 16–20 years and 21–25 years age range are well represented. Of particular interest, male clients out-number female clients. Supporting the relevance of the CHP-SC as a best practice service model for EPI is the proportion of clients with the diagnosis of psychotic disorder: 14% of clients received an International Classification of Diseases diagnosis of F20–F29: schizophrenia, schizotypal or delusional disorder. A detailed CHP-SC program description is available at www.clearthinking.com.au.

Discussion

In conjunction with a literature review in the companion paper,1 these studies represent the most comprehensive examination of best practice for delivery of EPI to Indigenous communities in Australia to be reported in the scientific literature to date. The methodological approach to assessing best practice was to look for triangulated points of convergence across descriptions in the published and unpublished literature, the opinions of IMHWs, and program features observed in our case study of the CHP-SC. The main result of our examination is that Indigenous sub-teams embedded within mainstream MHS contexts, which service all Indigenous mental health presentations including early psychosis patients, may be a best practice service model. The effectiveness of this model appears to reside in its capacity to be tightly integrated into Indigenous primary care and other community-based social service settings, and to support culturally safe practice. Despite restricting our focus group methodology to one group session only, we appeared to reach a ‘saturation’ point where no new themes were emerging. The opinions of the IMHW who attended the focus group were representative of the larger membership of IMHW working in mainstream MHSs. Indeed, the focus group discussions about best practice were, on the whole, in line with commentary in the literature (e.g.6,7) as well as the specific recommendations about what works to overcome Indigenous disadvantage, reported by the Closing the Gap Clearing house.8,9 There appears to be a broad range of barriers to be overcome if mainstream MHSs are to fulfill their service obligations to Indigenous communities. Consistent with our interpretation of the literature, the opinions of IMHWs were that these barriers could most readily be addressed by mainstream MHSs creating Indigenous-specific sub-teams coordinated within the broader service.

To complete the triangulation of sources of data, a case study of the CHP-SC was carried out. Convergent with the literature review and IMHW opinion, the CHP-SC represented an Indigenous sub-team coordinated within a mainstream MHS. Administrative data showed that the introduction of this service model was associated with substantially higher rates of engagement and service provision to both male and female young adult Indigenous people, many presenting with first episode psychosis. Some of the features of the CHP-SC have been reported earlier to be effective in an inner city MHS.10 The value of a case study is that it produces context-dependent knowledge and experience, and if enough detail is obtained over time it can be highly reliable.4 The limitations of our case study included: not making more than one site visit; not observing day-to-day operations; not canvassing non-program staff opinion broadly enough; and not interviewing Indigenous patients attending the program or auditing their medical records. The major strength of the study was the collection of time series data pre- and post-implementation of the CHP-SC. Nonetheless, as with the interpretation of the literature review, our conclusions must be viewed as preliminary until a future formal evaluation is completed. Well-suited to this situation is the stepped-wedge study design in which the service intervention (e.g. the Indigenous sub-team) is rolled-out sequentially across multiple sites so that at evaluation end all services will have implemented the intervention.11 For the Indigenous sub-team to optimally deliver EPI, the close collaboration or input of the EPI team or clinician would seem beneficial, if the MHS has such specialist expertise. The alternate model, a specialist EPI team with IMHW input, may have resource limitations which might dictate that (a) the IMHW input to a specialist EPI team be outsourced (not provided by a member of the EPI team) given the low number of new cases of Indigenous first episode psychosis seen by a single EPI team, (b) there is insufficient capacity to provide high levels of integration with Indigenous primary care and communities (as almost all EPI patients will be non-Indigenous), and (c) there is inadequate focus on cultural safety.

In conclusion, we found preliminary but convergent evidence that an Indigenous sub-team coordinated within a mainstream MHS, delivering general mental health services to specified Indigenous communities, which is tightly integrated into Indigenous primary care and other community-based social services represents a best practice service model for EPI provision to Indigenous people. We recommend that this service model be urgently subjected to formal evaluation.

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Disclosure

The authors report no conflict of interest. The authors alone are responsible for the content and writing of the paper.

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