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Abstract. Efforts to address Indigenous health disadvantage require a refocus on urban settings, where a rapidly increasing majority (79%) of Indigenous Australians live. Proximity to mainstream primary care has not translated into health equity, with the majority of the Indigenous burden of disease (73%) remaining in urban areas and urban Indigenous people continuing to face significant barriers in accessing comprehensive and culturally appropriate care. This paper presents a case study of how the Institute for Urban Indigenous Health (IUIH) has strategically responded to these challenges in South East Queensland – home to Australia’s largest and equal fastest growing Indigenous population. The IUIH has developed a new regional and systematised model – a regional health ‘ecosystem’ – for how primary care is delivered and intersects with the broader health system. Through intentional action, which strengthens the self-efficacy of community, the IUIH System of Care has delivered real gains for the Indigenous population of the region and has the capacity to deliver similar improvements in health access and outcomes in other regions.

Additional keywords: Aboriginal and Torres Strait Islander, Closing the Gap, community control, self-determination.

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Introduction

In 2008, the Council of Australian Governments (COAG) launched its Closing the Gap (CTG) strategy, an ambitious commitment to address disparity and improve outcomes for Indigenous people. Following a 10-year review of progress, the strategy is not on track to meet the majority of its objectives, including the headline target to achieve Indigenous life expectancy equality by 2031, with the lack of Indigenous leadership in the reform agenda put forward as a primary reason for the lack of progress (Council of Australian Governments 2018).

The Institute for Urban Indigenous Health (IUIH) was established at the beginning of the CTG reforms and has operated through the first 10 years of the CTG process. An Indigenous-led, regional Aboriginal Community Controlled Health Service (ACCHS) based in Brisbane, Queensland, Australia, the IUIH was created by four founding member ACCHSs in 2009 located in the urban footprint of South East Queensland (SEQ). As of 2019, it is now the largest ACCHS (in terms of client base) and one of the largest community health services (mainstream or Indigenous) in Australia.

This paper presents a case study of the IUIH System of Care, the main outcomes achieved to date and opportunities to support COAG’s 2018–19 Refresh of the CTG Strategy, including addressing emergent priorities such as the rapid urbanisation of the Indigenous population.

Policy and service context

Prior to the IUIH, there was limited research that examined the continuing and significant disadvantage experienced by urban Indigenous Australians (Eades et al. 2010). This was mainly due to the misconception that urban Indigenous populations enjoyed easy access to, and were benefiting from, ‘mainstream’ health services.

The contrary reality was that proximity to mainstream services in urban settings had not translated into better health outcomes for Indigenous people. This was due to a high degree of inequity, geographical dispersion and segregation, with urban Indigenous people typically residing in isolated, outer suburban areas, characterised by low socioeconomic status and limited employment opportunities (Brand et al. 2016).

These barriers have been magnified due to the rapid urbanisation of Australia’s Indigenous population, with 79% of Indigenous Australians now living in urban areas (Australian Bureau of Statistics 2017). Nationally, the urban Indigenous population is growing faster than those in remote areas, and far outpaces the overall non-Indigenous urban population growth (Markham and Biddle 2018).
What is known about the topic?
• Urban Indigenous Australians comprise most of the Indigenous population and disease burden. There are limited studies on how effective community engagement and control can reduce health inequities of this cohort.

What does this paper add?
• The IUIH model further builds the evidence base on best practice approaches to Indigenous health, and may be replicable in the context of the Closing the Gap refresh agenda.

In addition, access to culturally appropriate health care remains out of reach for most urban Indigenous Australians (Liaw et al. 2019). Compared with ACCHSs in remote areas, which were reaching 97% of their potential Indigenous population, in 2015, ACCHSs were only reaching 26% of Indigenous people living in major cities (Australian Institute of Health and Welfare 2017).

These access challenges have corresponded to poor health outcomes for urban Indigenous Australians (Eades et al. 2010). While remote Indigenous populations generally experience greater rates of disadvantage relative to urban Indigenous populations (Carson et al. 2018), the overall health gap is weighted to urban settings. Given the overwhelming proportion of the Indigenous population is in non-remote areas, nearly three-quarters of the total national Indigenous burden of disease (using Disability Adjusted Life Years, DALY) and the Indigenous health gap (DALY Gap) is associated with urban areas (73% and 74% respectively) (Australian Institute of Health and Welfare 2016).

The System Innovation

The SEQ region represents an amplification of these demographic and health challenges for urban Indigenous Australians. Home to 38% of Queensland’s and 11% of Australia’s total Indigenous population, SEQ is the largest and equal fastest growing Indigenous region in Australia. From an Indigenous population of 46,279 when the IUIH was established, it has rapidly grown to 84,929 (Australian Bureau of Statistics 2018) and projected to grow to 130,000 in 2031 – 50% higher than Sydney’s projected population (Biddle 2013). At the time of the IUIH’s establishment, there were high levels of relative health disadvantage between Indigenous and non-Indigenous people in the major city populations of SEQ compared with remote populations of Queensland, as measured by the Health Adjusted Life Expectancy (HALE) Gap of 11.5 and 7.6 years respectively (Queensland Health 2017).

Prior to the IUIH’s establishment in 2009, the four existing SEQ ACCHSs each were faced with significant challenges in providing access and health servicing at the levels necessary to combat the rapidly widening health gap. Population mapping showed that existing clinic locations no longer had the capacity to reach the dispersed and rapidly growing Indigenous population, with approximately 8000 (16%) of the SEQ catchment population at the time accessing an ACCHS (combined client numbers of the four ACCHSs in 2009). Internal data also highlighted very poor take-up rates of Indigenous Preventive Health Checks (MBS item 715), with only 1206 (2.4%) of the SEQ Indigenous population completing an Indigenous Preventive Health Check (MBS Item 715) between 2008 and 2009 (Medicare Australia Statistics 2010). These rates highlighted significant issues around access to culturally appropriate health care to service the needs of the growing urban Indigenous population, and provided the impetus for the IUIH. An integrated regional community governance model was deemed to have the best chance to bring about the systemic and catalytic changes required. Established as a regional backbone organisation by the four existing SEQ ACCHSs covering the Local Government Areas of Brisbane, Gold Coast, Redland, Moreton Bay, Ipswich, Laidley, Somerset and the Scenic Rim, the IUIH’s mission has been to lead the planning, development and delivery of services throughout the ‘IUIH Network’ (Table 1).

The cultural frame of reference for the IUIH network links to traditional ways of being, doing and belonging, when for thousands of years, Aboriginal tribes and nations across SEQ had come together to achieve shared and cross-territorial goals. Underpinning the establishment of the IUIH, these cultural foundations have been developed under a Cultural Integrity Investment Framework (Institute for Urban Indigenous Health 2018), known as The Ways, which defines the shared aspirations of all operations of the IUIH Network.

Given the complex and fragmented nature of the health system, integration of services at a regional level was seen as a critical step to ensuring integrated care at the local clinic level, and consequently increased access to services (Lewis and Myhra 2018). The novel approach taken by the IUIH was that, rather than giving clients a compass to navigate the health system, a coherent and integrated regional ‘ecosystem’ was developed in the form of the IUIH System of Care.

Table 1. Institute of Urban Indigenous Health network comprises the main IUIH organisation, its member services and clinics

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute for Urban Indigenous Health (IUIH)</td>
<td>Regional backbone organisation operates the Salisbury Mums and Bubs centre Clinics in Caboolture, Morayfield, Strathpine, Deception Bay and Margate</td>
</tr>
<tr>
<td>Moreton Aboriginal and Torres Strait Islander Health Service (operated by IUIH)</td>
<td>Clinics in Woolloongabba (primary), Browns Plains, Northgate, Logan and Loganlea</td>
</tr>
<tr>
<td>The Aboriginal and Torres Strait Islander Community Health Service Brisbane</td>
<td>Clinics in North Stradbroke Island (primary), Capalaba and Wynnum</td>
</tr>
<tr>
<td>Yulu-Burri-Ba Aboriginal Corporation for Community Health</td>
<td>Clinics in Miami (primary), Oxenford and Bilinga</td>
</tr>
<tr>
<td>The Kalwun Development Corporation</td>
<td>Clinics in Ipswich (primary), Goodna, Laidley and Booval</td>
</tr>
<tr>
<td>The Kambu Aboriginal and Torres Strait Islander Corporation for Health</td>
<td></td>
</tr>
</tbody>
</table>
This ecosystem promotes integrated health solutions and operations between all levels of the IUIH Network, while seeking simultaneously to influence mainstream policy and strengthen linkages with mainstream services. Central to all activity is the holistic targeting of the social determinants of health, which account for 34% of the health gap between Indigenous and non-Indigenous people (Australian Health Ministers’ Advisory Council 2017).

Key components of the IUIH System of Care

System architecture

The IUIH facilitates an integrated approach that engages across local, system and community levels. At the local level, there is a focus on implementing a standard Model of Care at the point of service (clinic). This supports a universal primary care service for clients (supplemented by Medicare and therefore at no cost to the patient) at each of the IUIH Networks’ 20 clinics, supplemented by a comprehensive range of locally accessible, but regionally managed and integrated programs that result in a local ‘one-stop-shop’ for clients. The IUIH-delivered allied health and specialist workforce provide regional servicing of all clinics in an outreach capacity, ensuring ready access to these services ‘in-house’ and consistent quality and cultural competency across the network. Other services integrated into clinics include mental health, social health and family wellbeing services, dental, ‘IUIH Connect’ (which works with hospitals to support clients on discharge), care-coordination, community aged care, legal education and advocacy, maternal and child health (Birth in Our Community service) and National Disability Insurance Scheme services. These wraparound services are accessed through referral when patients attend any of the network clinics to see their GP.

The regional management of many of these wraparound services is a distinguishing feature of the System of Care, and fits the wider role of the IUIH as leading a regional approach to strategic planning, service and workforce development, business modelling, fund pooling, governance, Continuous Quality Improvement (CQI) and research. In combination with a strong preventive health and social marketing framework, delivered through the IUIH’s Deadly Choices program (Malseed et al. 2014), the system works to engage directly with community, targeting wider social determinants of health and working to generate demand for change.

Governance

The IUIH operates as an ACCHS, a model closely aligned with the self-determination of Aboriginal and Torres Strait Islander people (Panaretto et al. 2014). A strong corporate governance environment was developed, combining corporate accountability with community and cultural legitimacy. The resultant structure is a representative and independent, skills-based IUIH board, with each member service maintaining its own independent board. This regional approach to governance encompasses shared decision-making between member organisations, highlighted in the clinical governance framework of the network. The notion of clinical governance as being ‘everybody’s business’ has ensured it is embedded into the processes of individual governing boards, management and staff throughout all clinics, supported by standardised resources that aim to improve clinical quality and safety (Institute for Urban Indigenous Health 2019). This is underpinned by a shared medical record system (MMEx; ISA Technologies Inc., Perth, WA, Australia), allowing access to a patient’s record wherever they attend within the network. A regional CQI program and target setting at clinic and region level encourages engagement around performance and improves transparency. A data analytics and business intelligence service made available to all member services supports reporting, planning and clinical care.

The pursuit of a ‘profit for purpose’ model is a critical component that supports the provision of the integrated model at a regional level. Quality care based on specific targets and high adoption rates of best-practice cycles of care is paired with optimal use of the Medicare Benefits Schedule. This has been a deliberate policy to reduce grant dependence and increase financial sustainability, supporting the IUIH’s growth in SEQ (particularly in the provision of non-grant-funded services) and in supporting the drive to create a truly Indigenous-led and determined service.

Workforce strategy

Across the region, a process of workforce modelling is undertaken, ensuring optimum and standardised staff ratios are configured to meet the needs of each clinic and its population catchment. This fits within a wider, calibrated approach to practice management, where clinic design, size and systems operations inform an optimised workforce strategy, ensuring business efficiency and clinical effectiveness are balanced and responsive to local needs. To ensure workforce growth, a workforce development strategy, termed ‘Growing our Own’, has been implemented. Comprising training, employment pathways such as school- and work-based traineeships, cadetships, university student placements and ready-for-work programs, the strategy aims to strengthen the skill base within the local SEQ Aboriginal and Torres Strait Islander population. Emphasis is given to disadvantaged and vulnerable Indigenous young people experiencing barriers to education and work.

Results

The IUIH was formed with the initial aim of improving access to comprehensive primary health care and health outcomes for Aboriginal and Torres Strait Islander people of SEQ. Progress against these strategic aims and the wider structural aim of implementing the IUIH System of Care to create an integrated, regional network can be assessed at several levels.

Patient access and activity

Since 2009, the number of clinics in the IUIH network has grown from 5 to 20 (plus two stand-alone mums & bubs clinics) in 2019. The placement of clinics, based on population mapping, ensures that clinics are opened where Aboriginal and Torres Strait Islander populations are living within SEQ. The targeted process of network growth has supported year-on-year increases in the number of regular IUIH network clients (defined as three visits in the last 2 years; Australian Institute of Health and Welfare 2019) from 8000 to 33 300 in 2019. This corresponds to an increase in regular client coverage of the Indigenous population of the region from 16% to 45%.

In conjunction with increasing access to primary health services, the emphasis on holistic treatment of patients from their initial contact with the network has contributed to an increase in
the number of Indigenous health checks conducted in the region, from 550 in 2008–09 to 20,970 in 2017–18. Performance against national key performance indicators (nKPI) now indicates that health assessments (PI03) undertaken in SEQ exceed the national targets set for 2023 (Australian Institute of Health and Welfare 2017). At December 2018, the IUIH network had exceeded national 2023 targets related to six of the 20 nKPIs (four do not have targets) and has exceeded the annual national results across 18 nKPIs (Table 2).

The Deadly Choices program has had significant growth, making it widely recognised at a national level through its sports ambassador program, partnerships with 16 National Rugby League and Australian Football League clubs and extensive social media presence (McPhail-Bell et al. 2018). The Deadly Kindies program has proven to be a success in increasing attendance at kindergarten, a known risk factor for Aboriginal and Torres Strait Islander children to improve social and health outcomes later in life (Hewitt and Walter 2014). Since inception in early 2017, enrolments at kindergartens have increased from 76 to 317 during 2017–18.

**Patient outcomes**

Improvements in patient outcomes have been observed across the network, with many of the outcomes directly linked to Closing the Gap targets or nKPIs. A recent epidemiological study in 2018 of patient outcomes found that the IUIH System of Care was closing the HALE gap 2.3-fold faster than usual Indigenous care (L. Turner, S. Begg, C. Nelson and K. Shaw 2019, unpubl. data).

A recent prospective cohort study published in The Lancet’s eClinicalMedicine examined the IUIH’s Birthing in Our Community (BiOC) service, an integrated and culturally appropriate maternity service for Aboriginal and Torres Strait Islander mothers and babies. The study found that, compared with standard care, women receiving care through BiOC were less likely to have a preterm birth than women receiving standard care (6.9% vs. 11.6%) and had significantly reduced odds (OR = 0.50, 95% CI: 0.31, 0.83) of having a preterm birth (Kildea et al. 2019). In addition, the program has been found to reduce the occurrence of low birthweight from 18% to 6% (Kildea et al. 2018). This is a significant outcome, nearly closing the gap between Indigenous and non-Indigenous preterm births and neonatal unit admissions.

Programs designed to prevent and manage chronic disease have also shown results. The IUIH’s Work It Out self-management program for people with chronic conditions has been found to improve functional exercise capacity (6-min walk test, $P = 0.023$, 95% CI: 0.01, 0.07), systolic blood pressure ($P = 0.009$, 95% CI: $-18.82$, $-3.18$) and weight reduction among higher weight participants (BMI, $P = 0.037$, 95% CI: $-3.03$, $-10.1$) (Mills et al. 2017). Participants were also found to have higher utilisation rates of health assessments, GP management plans and other enhanced primary care MBS items, and were more likely to utilise these than non-participants (Hu et al. 2019).

**Enabling systems and governance**

The governance structure within the IUIH has evolved since 2009 to meet the needs of an expanding network. Clinical

### Table 2. Performance against National Key Performance Indicator (nKPI) national figures and 2023 targets (where applicable)

<table>
<thead>
<tr>
<th>nKPI</th>
<th>nKPI description</th>
<th>Exceeding national nKPI % (December 2018)</th>
<th>Exceeding national 2023 targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI01</td>
<td>Birthweight recorded$^A$</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PI03</td>
<td>Health assessment (MBS Item 715)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PI05</td>
<td>HbA1c recorded (type 2 diabetes clients)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PI06</td>
<td>HbA1c results (type 2 diabetes clients)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI07</td>
<td>GP Management Plan (MBS Item 721)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI08</td>
<td>Team Care Arrangement (MBS Item 723)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI09</td>
<td>Smoking status recorded</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PI10</td>
<td>Smoking status result</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI11</td>
<td>Smoking during pregnancy$^A$</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PI12</td>
<td>Body mass index (overweight or obese)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI13</td>
<td>First antenatal care visit</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI14</td>
<td>Influenza immunisation (aged ≥50 years)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI15</td>
<td>Influenza immunisation (type 2 diabetes or COPD clients)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI16</td>
<td>Alcohol consumption recorded</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI17</td>
<td>AUDIT-C result recorded</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI18</td>
<td>Kidney function test recorded (type 2 diabetes or CVD clients)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PI19</td>
<td>Kidney function test result (type 2 diabetes or CVD clients)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PI22</td>
<td>Cervical screening recorded</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PI23</td>
<td>Blood pressure recorded (type 2 diabetes clients)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PI24</td>
<td>Blood pressure ≤130/80 mmHg (type 2 diabetes)</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

$^A$Recognised issues with these nKPI in terms of how data are extracted from the Electronic Medical Record System.
governance has become embedded across all levels, with regional committees (e.g. lead clinicians, clinic managers) contributing to a governance framework encompassing different roles and functions within clinics, standardised and operating according to best practice. Feedback from staff and clients is seen as a critical component of maintaining a quality service, and in conjunction with standard reporting channels (through the data and business intelligence functions) is used to facilitate resource allocation and support throughout the network to meet changing demand. The governance structure has been recognised nationally, with the IUIH a joint national winner of the 2018 Indigenous Governance awards (Reconciliation Australia 2019).

Workforce development
The IUIH workforce has grown from five staff in 2009 to over 600 in 2019. The wider IUIH network employees over 1200 staff, with 620 of these being Aboriginal or Torres Strait Islander, making the IUIH network the largest Indigenous employer in SEQ. Around 20% of IUIH’s employees have transitioned into the organisation through one or more of IUIH’s targeted workforce training and development pathways.

What can be learnt from this case
Since first identified (Eades et al. 2010), there continues to be a research gap in urban Indigenous health. The empirical evidence tends to be confined to specific programs or cohorts, with limited studies reporting on the linkage between health system model approaches and health outcomes (Askew et al. 2018). This is a significant issue since an incremental approach to closing the gap is unlikely to succeed without commensurate system level and structural change (Donato and Segal 2013).

The IUIH experience supports an established body of work showing that the best progress made over the last 10 years in closing the gap has been through community-controlled approaches to Indigenous-led design and implementation of programs (Panaretto et al. 2014). A priority focus on a systemic and regional reform agenda has also been a critical enabler to effect change. Here, the IUIH System of Care is considered a novel initiative, implementing a ‘model of care’ at the local clinic level that embeds frontline clinical care into a broader regional ecosystem.

Advantages of a regional approach to service reform like that from the IUIH can be found through the generation of sufficient scale, scope and access to resources, enabling improved and culturally appropriate care for patients. The holistic healthcare experience and the access it provides to social support services also help address systemic barriers and fragmentation that have been serious inhibitors to improving access and outcomes, including social determinants of health. However, the approach has required some innovative enhancements to existing service design in the community-controlled health sector. In particular, a funding model was needed that integrated health and commercial value creation, enabling a cycle of profit and reinvestment (Battilina et al. 2012). This has been fundamental to the IUIH’s success and its capacity to deliver the large-scale solutions necessary to meet community needs. In 2018, 29% of its annual AS$83 million budget was self-generated, with AS$15 million of this generated through Medicare (the IUIH maintains a rate of AS$1 of Medicare income for every AS$1 primary health care grant funding received), which has grown from approximately AS$3 million in 2010.

Despite success to date, future challenges remain. The 2016 Australian Census has shown that, in line with national trends, the SEQ Indigenous population has increased by nearly 33% since 2011 (Australian Bureau of Statistics 2017), which presents challenges to access and service delivery. The IUIH is taking steps to recalculate its service delivery models in response to this through realignment of clinic roles, workflow improvements and team-based models of care (Gottlieb 2013), explored as solutions to allow the network to maintain current levels of service across the SEQ region while increasing capacity for the growing Indigenous population.

The success to date of the IUIH System of Care raises the question of its replication in other parts of the country. A recent independent review of the IUIH (Nous Group 2019) supports the approach the IUIH has taken in terms of governance, funding and in planning for the challenges that lay ahead, and recommends that ‘government and peak bodies proactively seek opportunities to replicate the success achieved’. The regionally localised nature of the SEQ Indigenous population, the specific ACCHSs that formed the IUIH and its history in delivering services in the region, a strong commitment to cultural traditions, and the commitment of a core team have all contributed to its success. While the variation in health ecosystems in other parts of the country (e.g. regional and remote) may present some challenges, implementations currently underway suggest the system is transferable. In particular, the IUIH is working with several ACCHSs around the country, including in remote settings, to help implement specific components of the model. This includes network development to support access, shared IT medical record system implementation and prevention strategies. For example, the Deadly Choices program is now implemented throughout Queensland, and Deadly Choices licensing has been taken up by ACCHS across most Australian states and territories. The IUIH is also managing the implementation of new clinics for ACCHSs in other parts of the country, implementing aspects of the system that align with local resources and needs.

Conclusion
This case study highlights a system of care that provides solutions to address Indigenous health inequity in the SEQ region that could potentially be applied in other parts of the country. The regional IUIH System of Care has evolved as an atypical but demonstrably effective amalgamation of cultural, clinical, corporate, commercial and community components – not previously seen in this form or on this scale in the Indigenous health landscape. In response to strong interest, the IUIH has commenced exploring ways to standardise and make available support of knowledge translation of its System of Care. Future efforts should aim to support the adoption of the model to fit the varied landscape of community-controlled health care nationally.

Conflicts of interest
The authors declare that they have no conflicts of interest.
References


Australian Institute of Health and Welfare (2017) National Key Performance Indicators for Aboriginal and Torres Strait Islander primary health care: results from June 2016. National key performance indicators for Aboriginal and Torres Strait Islander primary health care series no. 4. Cat. no. IHW 177. AIHW: Canberra, ACT, Australia.


