

Data Quality Assessment and Support

Stage 2

Department of Health

Final Report

Acknowledgement

As a firm, KPMG acknowledges Aboriginal and Torres Strait Islander peoples as the First Peoples of Australia. We pay our respects to Elders past, present and emerging. Our aim is to build a future where all Australians – Indigenous and non-Indigenous – are united by our shared past, present, future and humanity.

KPMG would like to acknowledge the 74 Health Services, National Aboriginal Community Controlled Health Organisation, State and Territory Sector Support Organisations, Clinical Information System Vendors, the Commonwealth Department of Human Services and the Commonwealth Department of Health for the significant time contribution each has provided over the course of this project.

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Glossary

The glossary below sets out abbreviations and definitions, including those specific to the Indigenous Australians' Health Programme, so that these terms are used consistently throughout this report to ensure continuity in the analysis.

- ABS - Australian Bureau of Statistics
- ACT - Australian Capital Territory
- SSOs - Sector Support Organisations. Refers to the eight SSOs of NACCHO who represent the services in Australia in their respective State or Territory.
- AGM - Annual General Meeting
- AHP - Aboriginal and Torres Strait Islander Health Practitioner
- AHW - Aboriginal Health Worker
- AIHW - Australian Institute of Health and Welfare
- ASGS - Australian Statistical Geography Standard
- Assessment tool - Refers to the Data Quality Assessment Tool developed by KPMG. This assessment tool was used during the assessment to document information received during the site visits in a consistent manner and assist in determining an appropriate overall assessment rating.
- CC - Client Contacts. A contact between a client and a health worker¹.
- CIS - Clinical Information System
- Client - An individual receiving health care by an organisation during the collection period
- CPHC SAC - Comprehensive Primary Health Care (CPHC) Sustainability Advisory Committee (SAC)
- CQI - Continuous Quality Improvement
- CVD - Cardiovascular disease
- Data quality dimensions - These dimensions of quality are used in assessing and reporting on the quality of statistical information. Also used to assist in the development of statistical collections to produce high quality outputs².
- Department - Commonwealth Department of Health
- DHS - The Department of Human Services

¹ OCHREStreams. [*On-line Services Report \(OSR\) Data Collection Instrument 2015-16 Final Version*](#). Accessed on 18 June 2018.

² Australian Bureau of Statistics. April 2015. [*The ABS Data Quality Framework*](#). Accessed on 20 June 2018.

- EoC - Episode of Care. An EoC is a contact between an individual client and service, with one or more staff, to provide health care within one calendar day. All contacts on the one day are treated holistically as one EoC³.
- FMAC - Funding Model Advisory Committee (FMAC) has been superseded by the Comprehensive Primary Health Care (CPHC) Sustainability Advisory Committee (SAC)
- GP - General Practitioner
- HDP - Health Data Portal
- Health Assessment - An assessment of the patient's health, including their physical, psychological and social wellbeing. It also assesses what preventive health care, education and other assistance should be offered to the patient to improve their health and wellbeing.
- HS DAG - Health Services Data Advisory Group
- IAHP - Indigenous Australians' Health Programme
- Implementation Plan - National Aboriginal and Torres Strait Islander Health Plan 2013-2023
- Inner Regional Australia - Inner Regional Australia is a category within the Australian Statistical Geography Standard (ASGS) Remoteness Structure. Inner Regional Australia is defined as 'Statistical Areas Level 1 (SA1s) with an average ARIA+ index value greater than 0.2 and less than or equal to 2.4'⁴.
- KPI - Key Performance Indicator
- Locum - A locum staff member is a person who is temporarily fulfilling the duties of a permanent role within a service
- Major Cities of Australia - Major Cities of Australia (not to be confused with Major Urban) is a category within the ASGS Remoteness Structure. Major Cities of Australia is defined as 'Statistical Areas Level 1 (SA1s) with an average Accessibility/Remoteness Index of Australia (ARIA) value of 0 to 0.2'⁵.
- MBS - Medicare Benefits Schedule
- NACCHO - National Aboriginal Community Controlled Health Organisation
- National trajectories - Refers to the Implementation Plan Trajectories for the Aboriginal and Torres Strait Islander Health Plan 2013-2023⁶
- nKPI - National Key Performance Indicators

³ OCHREStreams. [*On-line Services Report \(OSR\) Data Collection Instrument 2015-16 Final Version*](#). Accessed on 18 June 2018.

⁴ Australian Bureau of Statistics. October 2013. [*Glossary of Statistical Geography Terminology*](#). Accessed on 20 June 2018.

⁵ Ibid

⁶ Australian Institute of Health and Welfare, 2018. [*Tracking progress against the Implementation Plan goals for the Aboriginal and Torres Strait Islander Health Plan 2013-2023*](#). Accessed on 21 June 2018.

- NSW - New South Wales
- NT - Northern Territory
- NT AHKPI - Northern Territory Aboriginal Health Key Performance Indicators
- OSR - Online Service Reporting
- Outer Regional Australia - Outer Regional Australia is a category in the ASGS Remoteness Structure. Outer Regional Australia is defined as 'Statistical Areas Level 1 (SA1s) with an average ARIA+ index value greater than 2.4 and less than or equal to 5.92'⁷.
- PoC - Point of Care
- Primary Health Care - This involves the first (primary) layer of services encountered in health care and requires teams of health professionals working together to provide comprehensive, continuous and person-centred care⁸.
- PHN - Primary Health Network
- PRODA - Provider Digital Access platform operated by the Department of Human Services
- QLD - Queensland
- Regular Client - A regular client is someone who has visited the organisation three or more times in the past two years⁹
- Remote Australia - Remote Australia is a category in the ASGS Remoteness Structure. Remote Australia is defined as 'Statistical Areas Level 1 (SA1s) with an average ARIA+ index value greater than 5.92 and less than or equal to 10.53'¹⁰.
- SA - South Australia
- Sector - Aboriginal Community Controlled Health Sector
- Service - Aboriginal Community Controlled Health Service
- SEWB - Social and Emotional Wellbeing
- TAS - Tasmania
- Transient - Refers to a client who is staying or working in a place for a short time only
- Vendor - Supplier of a CIS

⁷ Australian Bureau of Statistics. October 2013. [Glossary of Statistical Geography Terminology](#). Accessed on 20 June 2018.

⁸ Department of Health. April 2013. [Primary Health Care in Australia](#). Accessed on 20 June 2018.

⁹ Australian Institute of Health and Welfare. 2017. AIHW national Key Performance Indicators database: user guide reporting period ending 30 June 2017.

¹⁰ Australian Bureau of Statistics. October 2013. [Glossary of Statistical Geography Terminology](#). Accessed on 20 June 2018.

- Very Remote Australia - Very Remote Australia is a category in the ASGS Remoteness Structure. Very Remote is defined as 'Statistical Areas Level 1 (SA1s) with an average ARIA+ index value greater than 10.53'¹¹.
- VIC - Victoria
- WA - Western Australia

¹¹ Australian Bureau of Statistics. October 2013. [*Glossary of Statistical Geography Terminology*](#). Accessed on 20 June 2018.

Executive summary

Context and background

In January 2018, the Commonwealth Department of Health (the Department) engaged KPMG to undertake an assessment of Aboriginal Community Controlled Health Services (services) data collection practices and provide support and recommend (where appropriate) areas where the service might be able to improve data management and reporting practices (Stage 1). A wider aim of the assessment was to identify high level themes to assist and support the sector as a whole. An overarching report was developed at the conclusion of Stage 1, which synthesised common themes and findings across the services that participated in the assessment. The report highlighted common challenges services were facing to improve data quality, and informed targeted areas for improvement across the Aboriginal Community Controlled Health Sector (sector).¹²

In December 2018, the Department engaged KPMG to continue a second stage of work with the focus of investigating overall improvements in data management practice in response to the challenges identified in Stage 1. Stage 2 included the following elements:

- **Follow up consultations with 21 Stage 1 services.** This provided an opportunity for services involved in Stage 1 to complete a follow up consultation, to identify where services have improved their data collection practices since the assessment in Stage 1, and determine where services are experiencing barriers or challenges, and may require further support.
- **Additional data quality site visits at 21 Stage 2 services.** This provided services that did not participate in the first stage of the project the opportunity to participate and provided an opportunity to determine whether the themes identified in the first stage of the project were consistent across other services within the sector.
- **Undertake 15 site visits to assess improvements for claiming from the Medicare Benefits Schedule (MBS).** A sample of services were provided with an opportunity to participate in the activity. The activity aimed to identify the key enablers and barriers to MBS claiming for services, and to provide services with support to improve MBS claiming.

Assessment methodology

Each activity involved analysis of relevant data and consultation with services, either via a site visit or phone consultation using interviews, document reviews and recording of observations.

¹² Refer to [Data Quality Assessment and Support Project - Stage 1, Final Report](#).

Stage 1 follow up consultations

The follow up with Stage 1 services involved a two hour consultation using a standardised set of questions to guide the consultation and investigate progress for each area for improvement identified in Stage 1.

The service completed a self-assessment of their maturity against the four areas of focus:

1. Data Management
2. Clinical Information System (CIS)
3. Episodes of Care (EoC) and Client Contacts (CC)
4. National key performance indicator (nKPI) data quality.

An overall maturity assessment self-rating was then determined. KPMG challenged the service through the consultation, to ensure there was sufficient reasoning provided by the service for their self-assessed rating.

Following the consultation, the service was provided with a summary report outlining the improvements made and challenges experienced since the Stage 1 data quality assessment, their maturity self-assessment rating for each area of focus, and an overall self-assessment rating.

Data quality site visits and MBS site visits

The approach to the data quality assessment recognised that data quality is multidimensional, and the approach to the maturity assessment for the MBS activity recognised that there are a range of factors that impact on effective MBS claiming in services. For this reason, an assessment tool was developed for both the data quality assessment and the MBS activity, informed by Australian Bureau of Statistics (ABS) data quality dimensions. The development of the assessment tools were further informed by consultation with stakeholders, including National Aboriginal Community Controlled Health Organisation (NACCHO), Sector Support Organisations (SSOs)¹³, CIS vendors, Funding Model Advisory Committee (FMAC)¹⁴ and Health Services Data Advisory Group (HS DAG).

The data quality assessment tool for Stage 1 and 2 site visits encompassed the four focus areas of data management, CIS, EoC and CC, and nKPI data quality, whilst the assessment tool for the MBS activity encompassed three focus areas of systems and processes, leadership and organisational culture.

Minor amendments were made to the data quality assessment tool following Stage 1, to support the collection of additional data related to MBS claiming and the Health Data Portal (HDP). Otherwise, the question set remained consistent between Stage 1 and Stage 2.

The assessment tools supported analysis and assessment of the maturity of each service along a five point continuum ranging from Awareness (the lowest level of maturity) to Optimised (the highest level of maturity).

¹³ Sector Support Organisations (SSOs) were previously termed Affiliates.

¹⁴ FMAC has been superseded by the Comprehensive Primary Health Care (CPHC) Sustainability Advisory Committee (SAC).

A consistency review was undertaken by a senior leadership team from KPMG to ensure a calibration of ratings, prior to finalisation of ratings for each service.

Following the site visit, the service was provided with a summary report outlining the key observations, better practice, and areas for improvement, their maturity assessment rating for each area of focus, and an overall assessment rating.

Mature approach to data quality and Medicare Benefits Schedule (MBS) claiming

KPMG developed the five point rating scale which was used to assess all services, with the scale ranging from Awareness (the lowest level of maturity) to Optimised (the highest level of maturity). Mature services are considered services that have an overall rating of Measured (the second highest level of maturity) or Optimised.

For the data quality assessment, mature services had systems and processes in place to monitor and measure the effectiveness of their data collection and to make active interventions to support future improvements. Services with a lower level of maturity, rated as Awareness (key operational processes were unknown), Repeatable (standardised processes existed) or Managed (consistent set of policies and procedures), presented opportunities for further improvements to data quality practices.

For the MBS activity, mature services had a defined model of care that was well understood by all staff, used MBS data to inform improvements in MBS claiming practice, clearly communicated to all clinicians the MBS item numbers associated with the model of care and provided ongoing support and education to staff about eligibility criteria for claiming MBS reimbursements as well as a professional development pathway for Aboriginal Health Workers.

In the health sector in Australia, both mainstream and ACCHO's continue to try to improve the maturity of their data quality systems and processes to support their delivery of services. The Aboriginal Community Controlled Health Sector is demonstrating a strong level of maturity to improve data quality, with the findings below demonstrating areas of leading practice in the sector. Our assessment of maturity was undertaken at a point in time, the follow up consultations outlined below already demonstrate an improvement in data quality for a number of services.

Summary of Stage 1 follow up findings

Of the 53 services that completed an assessment in Stage 1, 21 services completed a follow up consultation. The follow up consultations were completed between March and May 2019, approximately one year after the Stage 1 data quality assessments were completed. Services completed a self-assessment of their maturity rating. During the assessment KPMG sought to explore the rationale provided for the self-assessment. Each service was able to provide an evidence base for their response.

Overall, of the 135 areas for improvement provided to these services in Stage 1, 125 (93 per cent) were either in progress (69) or had been implemented (56). This is provided in Table 1 below.

Table 1. Status of areas for improvement identified during Stage 1

Status	Areas of Immediate Action	Other Areas of Improvement	Total	Percentage
Implemented	22	34	56	42%
In Progress	32	37	69	51%
Not implemented	4	6	10	7%
Total	58	77	135	100%

Source: KPMG

Of the 21 Stage 1 services that opted to complete a follow up consultation in Stage 2, three services received an overall Optimised rating (the highest possible) in Stage 1. Of the 18 services with potential to improve their maturity along the continuum:

- Ten services (56 per cent) self-assessed their overall maturity to have increased by at least one maturity rating than was received in the Stage 1 data quality assessment.
- The remaining eight services (44 per cent) self-assessed their overall maturity as the same maturity rating the service received in Stage 1.

Services identified the greatest improvement for the data management area of focus, with 12 services (57 per cent) self-rating their maturity for data management at a higher level than was received in Stage 1.

In Stage 1, eight services (38 per cent) were assessed as having a mature approach to data quality (an overall rating of either Measured or Optimised). At the time of the follow up consultation, this number had grown to 13 services (62 per cent) as a result of five additional services self-assessing improvements in their maturity. Feedback indicated that the stage 1 assessment refocussed effort, at a management and Board level, on the importance of data quality and continuing to improve maturity.

Focus Area Findings

Improvements made to data quality:

- Objective: Establish whether services have made improvements to data quality processes since the assessment was completed in 2018.
- Findings:
 - Services reported that significant progress has been made to enhance the capability of staff within the services, which included providing further training and support to staff, embedding workflows, and developing documentation to improve knowledge and support consistent practices.

- Most services reported an improvement in data quality processes, reporting practices and confidence in the accuracy of the reported data, this enabled services to use clinical data to better inform service delivery.
- Most services reported they have implemented or strengthened continuous quality improvement (CQI) processes through establishing a CQI committee or introducing clinical governance meetings with a focus on data quality.
- Services reported they have implemented various processes to try to improve the data quality of the service, including processes to improve the retention of staff within the service, and to improve succession planning to ensure knowledge is retained within the service when key staff leave.
- Some services reported they have configured their CIS to ensure that data can consistently and accurately be captured in the CIS, aligned with their model of care.

Barriers to further improvement:

- Objective: Establish whether services continue to face barriers to further improvement since the assessment was completed in 2018.
- Findings:
 - Services identified that lack of workforce capacity and instability remained a main barrier and challenge to implementing the improvements to data quality.
 - Services identified that staff engagement was a barrier for implementing the areas for improvement, noting that successfully getting staff to understand and value data quality within the service remained challenging.
 - Services identified common challenges with the CIS which impacted on services implementing some of the areas for improvement. The challenges were in relation to successfully upgrading the CIS, IT infrastructure issues, and ensuring that all activity is captured within the CIS.

Summary of Stage 1 and 2 Data Quality Assessment and Support Project (DQASP) findings

Overall, 74 services participated in the assessment across Stage 1 and Stage 2, located in all States and Territories in Australia. The assessment found that 28 per cent of services had a mature approach to data quality at the time of their first data quality assessment. When considering the improvements identified during the Stage 1 follow up consultations, five additional services out of the sample of 21 services self-assessed they had moved to a mature approach to data quality, increasing the overall number of services that had a mature approach to data quality to 35 per cent of services (26 out of 74 services). This does not account for the 32 services that did not participate in the Stage 1 follow up consultation that may have experienced improvements in data quality since the Stage 1 assessment and shifted to a mature approach to data quality.

Overall, the 21 new services visited in Stage 2 confirmed the key themes and findings identified in the Stage 1 site visits, with little difference found in the distribution of maturity ratings between the two phases of work. The data collection practices of services involved in both stages of the assessment were varied.

The summary findings for each of the four focus areas of the assessment are provided below.

Focus Area Findings

Data Management:

- Objective: Establish the extent to which the health services have effective mechanisms to articulate their data requirements and to support their workforces to sustainably produce high quality data.
- Findings:
 - Most services understood the value of data in measuring the impact of their service on improving health outcomes for the community.
 - Just over half of the services had a Managed or higher approach to data management. However, the capability and capacity of services to articulate data requirements and support their workforces to sustainably produce high quality data was variable.
 - Most services consulted through Stage 2 of DQASP reported that the HDP had reduced the reporting burden related to the nKPI data collections, however services also noted an increased reporting burden to other funders (notably Primary Health Networks (PHNs)).

Clinical Information System:

- Objective: Establish whether the health services have optimised or configured their CIS, and the extent to which these impact data quality.
- Findings:
 - The extent to which services had configured their CIS was largely dependent on their choice of system, particularly its level of configurability and whether it was able to capture the range of additional activity delivered by the service compared to mainstream primary health care.
 - The extent to which configuration impacted on data quality was highly dependent on the maturity of the service. Mature services were able to configure their CIS to support their model of care and allow all activity to be consistently and accurately recorded. Configuration by less mature services had the potential to negatively impact on useability and data quality.
 - Significant configuration was also found to reduce the benefit of standardised induction, training and support materials.

Episodes of Care and Client Contacts:

- Objective: Establish whether the health services processes for capturing data used in the EoC and CC counts are reasonable and whether there is a justifiable basis for the reported counts.

- Findings:
 - There was significant variation in the processes used by services to capture data used in the EoC and CC counts.
 - The majority of services consistently and accurately captured data related to activity delivered in a clinic setting by the medical workforce. However, in order to meet the needs of their community and deliver comprehensive health care, services typically delivered a much broader range of activity, compared to mainstream primary health care. This activity was often not accurately captured in reporting.
 - A significant number of services raised concerns that specific characteristics of their service impact their EoC to client ratio and that this may have a negative impact on their perceived performance. For example, services believe that having a high number of transient clients skew their EoC to client ratio downwards, as these patients don't necessarily receive regular care at the service but are included in their client count.
 - Most services consulted through the Stage 2 DQASP identified the process for reporting OSR data had simplified following the introduction of the direct load process.

nKPI data quality:

- Objective: Assess the quality of the values reported for the seven data items from the relevant nKPIs.
- Findings:
 - Most services considered that the data related to their performance for health assessments (PI 03) was generally accurate. These services considered health assessments integral to their model of care and as a result had developed workflows to support data capture.
 - More than 35 per cent of services did not believe all patients with diabetes in their community had been captured in the CIS, with most services reporting this was due to inaccurate data entry, directly impacting on the quality of denominator data for HbA1C (PI 05), Blood Pressure (PI 23) and Kidney Function (PI 18).
 - Manual processes required to populate or validate test results from point of care (PoC) testing and from external providers impacted the quality of numerator data for HbA1C (PI 05) and Kidney Function (PI 18).
 - Services nominated transient populations as a key barrier impacting on their performance for planned care (health assessments PI 03) along with patient preference (high rates of refusal for influenza immunisation PI 14).
 - Most services consulted through the Stage 2 DQASP identified the process for reporting nKPIs had simplified following the introduction of the HDP and direct load process.

This assessment identified a number of characteristics of a mature service which intersect all four focus areas. These are:

- **Leadership commitment to data quality**

The assessment found that a sustained and visible commitment by a stable service operational and clinical leadership group to the use of data to plan, deliver and monitor service delivery was an important characteristic of mature services.

This commitment by leadership was instrumental in creating a culture across all staff groups that valued data to understand team, clinic and service performance, community need and drive continuous improvement. This culture also impacted on the development and sustainability of policies, processes and systems to support data quality.

- **Workflow to support accurate and consistent data input**

Mature services had established workflows, aligned to their model of care, to support accurate and consistent data input by all staff.

The assessment identified that a significant proportion of services had an inconsistent approach to data input. This included a lack of understanding of what data should be captured to support reporting and where to appropriately capture data in the CIS, along with inconsistent data entry practices by staff. This had a material impact on the quality of OSR and nKPI reporting and the completeness of the patient record.

- **Dedicated resources with a focus on data quality and continuous quality improvement**

The assessment found that dedicated capability within a service was required in order to meet reporting obligations, ensure data quality and meaningful use of data to support improvement efforts.

Compared to mainstream primary health care, the reporting obligations of the sector are significantly greater. In order to meet these obligations and to effectively leverage this data for local use, mature services have created dedicated capacity within their organisations.

Services without this capacity often struggled to sustain the data management practices required for accurate reporting. These services were less likely to use data as part of a regular process of CQI.

- **Program of induction, training and ongoing monitoring**

Mature services had a robust program of induction, training and ongoing monitoring in place to support accurate and consistent data input and effective use of the CIS. This program was particularly important to orienting new staff to workflows and the model of care, and to sustaining good practice.

Less mature services had difficulty in developing and delivering an appropriate and tailored program. Staff at these services reported very little support on how to appropriately input data into their CIS. Services with an unstable or volatile workforce profile experienced particular challenges in providing sufficient induction and training support to itinerant staff to maintain data quality.

- **Continuous quality improvement cycle, supported by data**

The assessment found that a regular cycle of CQI, supported by data was critical to driving improvement.

These processes allowed services to identify and address data quality issues early and to leverage this data to understand performance. Whilst OSR data was not considered useful in this context, many services considered nKPI data at regular clinical, executive and board meetings, as well as at dedicated CQI forums. A number of mature services achieved measurable improvement in data quality and performance by cascading service level nKPI, MBS and other local targets to the clinic and individual staff level.

Less mature services often lacked a regular or robust process to monitor data quality or to use data to reflect on opportunities for improved service delivery. These services often found it difficult to identify the cause of data quality problems, respond to exception reports or confirm the accuracy of their reporting.

- **Alignment of the CIS with the model of care**

The assessment found that a significant number of services had difficulty capturing all of their activity in their CIS. This was particularly evident in the range of activity not typically delivered in mainstream primary care settings including transport, social and emotional wellbeing (SEWB) services and certain allied health services. The range of activity able to be captured in, and reported from, the CIS is in large part dependent on the organisation's choice of CIS.

To address this challenge, services had resorted to capturing this data in other manual and electronic systems. This created an additional data input burden, as well as significantly increasing the risk that activity would be inaccurately captured or missed in reporting.

Two reasons for this challenge were identified:

- Services were unaware of the functionality of their CIS to support capturing this data; or
- The off the shelf solution was unable to support capturing data of this type.

A number of services had successfully worked with their vendor to either understand existing functionality to capture this data or to configure their CIS to ensure that data could be captured. A small number of services struggled to reach the same outcome due to challenges contacting their vendor or prohibitive costs of change. There was limited evidence of a mechanism to identify configurations required by multiple services to support their model of care or to meet reporting obligations.

Summary of MBS findings

Overall, 15 services participated in the MBS activity, located in all States and Territories in Australia (except the Australian Capital Territory and Tasmania). Noting the small sample, the assessment found that 27 per cent of services had a mature approach to MBS claiming.

The MBS claiming practices of services involved in the assessment were varied. Mature services, those rated as Measured, had leadership with a commitment to claiming and an established model of care in place to support

MBS claiming. Services with a lower level of maturity, rated as Awareness or Repeatable, had few resources dedicated to education and support for MBS claiming, high workforce turnover and / or reliance on an outsourced workforce model including General Practitioner (GP) locums. For these services, their MBS data did not accurately and consistently reflect their activity, meaning the services are missing out on MBS revenue for eligible activity.

A clear relationship was identified between the services MBS maturity rating and the services data quality maturity rating received during the Stage 2 data quality assessment or self-assessed by the service during the Stage 1 follow-up consultation.

Of the five services that have a Measured or Optimised rating for their data quality maturity (either received during the Stage 2 assessment or self-assessed during the Stage 1 follow-up consultation), four services (80 per cent) received a Measured rating for the MBS activity.

Similarly, of the seven services that have an Awareness or Repeatable rating for their data quality maturity (either received during the Stage 2 assessment or self-assessed during the Stage 1 follow-up consultation), five services (71 per cent) received a Repeatable rating for the MBS activity.

The summary findings for each of the three focus areas of the assessment are provided below.

Focus Area Findings

Systems and Processes:

- Objective: Establish whether there were systems and processes in place to support consistent and accurate MBS claiming for eligible activity.
- Findings:
 - Most services had established systems and processes to support the accurate claiming of health assessments (715), with 80 per cent of services stating that their health assessments were always claimed against item number 715.
 - There were two main causes identified for services that did not consistently claim health assessments; firstly, services faced challenges when a 715 was billed at an alternative health care provider, and secondly, services favoured an alternative assessment as central to their model of care, such as a GP Management Plan (721, 723).
 - Most services were unclear regarding the MBS claiming criteria surrounding follow up items (10987 and 813xx¹⁵), however identified opportunities to improve their claiming of eligible follow up activity (10987 and 813xx).

¹⁵ 813xx refers to the following in-scope MBS item numbers: 81300, 81305, 81310, 81315, 81320, 81325, 81340, 81345, 81350, 81355 and 81360.

- Services found the allied health follow up activity the most challenging to consistently claim, with 47 per cent of services stating that allied health services provided following a health assessment were not always associated with an MBS number.

Leadership and Organisational Culture:

- Objective: Establish whether the leadership and other staff in the organisation demonstrated a commitment to the importance of MBS reimbursement for supporting the delivery of primary health care that meets the needs of the local population.
- Findings:
 - The leadership at most services demonstrated a commitment to the importance of MBS claiming as key source of revenue, however only 40 per cent of services identified that everyone in the organisation understood the importance of MBS.
 - Active monitoring and target setting of MBS claiming was found to increase the level of staff engagement and understanding of the MBS claiming criteria.

Service delivery and workforce model:

- Objective: Establish the extent to which the cycle of care and preferred service delivery model was known by all staff and what MBS items could be associated with activities within the cycle of care.
- Findings:
 - The majority of services, 53 per cent, identified that staff did not understand the cycle of care (the patient's journey from initial consultation to receiving appropriate follow up care) and lacked established workflows aligned to their model of care and eligible MBS items, creating barriers to effective claiming.
 - Most services had a defined cycle of care for health assessments, with the client seeing an Aboriginal and Torres Strait Islander Health Practitioner (AHP) / Aboriginal Health Worker (AHW) or Practice Nurse for observations before the client saw the GP to complete their health assessment.
 - Most services leveraged prompts or flags in their CIS to signal to staff when a health assessment or follow up consultation are due for a patient.
 - Services that employed a salaried model with partial MBS incentives built into GP contracts were identified to have the highest rate of MBS reimbursements.
 - Most services with locum or externally contracted GPs were found to have lower MBS reimbursements.

This assessment identified a number of characteristics of a mature service which intersect all three focus areas. These are:

- **Leadership commitment to MBS as an important source of revenue**

The assessment found that a sustained and visible commitment by a stable service operational and clinical leadership group to the importance of MBS reimbursement as an income stream for supporting the service to meet the needs of the community was an important characteristic of mature services.

- **Workflow to support accurate and consistent MBS claiming**

Mature services had established workflows, aligned to their model of care and eligible MBS items, to support accurate and consistent MBS claiming by all eligible staff.

The assessment identified that a significant proportion of services had an inconsistent approach to MBS claiming. This included a lack of understanding of what follow up items could be claimed following a health assessment. This had a material impact on the extent of MBS reimbursements for follow up activity, with services claiming an average of 1.24 follow up items per health assessment with an AHP or Practice Nurse (10987) and 0.19 allied health follow up items per health assessment (813xx).

- **Dedicated resources with a focus on submitting and reviewing MBS claims**

The assessment found that dedicated capability within a service created greater confidence across organisation staff regarding the MBS claiming process. Services reported that a dedicated resource enabled leadership to understand the barriers and enablers behind their organisation's MBS claiming, and actively implement interventions where required.

Services without this capacity often struggled to investigate their MBS claims, resulting in a higher proportion of rejected claims for the service. These services were also less likely to use MBS data to implement CQI interventions.

- **Program of induction, training and ongoing monitoring**

Mature services had a robust program of induction, training and ongoing monitoring in place to support accurate and consistent MBS claiming. This program was particularly important to orienting new staff to the MBS items associated with the service's model of care, and to sustaining good practice.

Less mature services had difficulty in developing and delivering an appropriate and tailored program. Staff at these services reported very little support on how to appropriately claim for eligible activity. Services with an unstable or volatile workforce profile experienced particular challenges in providing sufficient induction and training support to itinerant staff to maintain good MBS claiming practice.

The value of the Health Data Portal to services

To maintain continuity in the approach for the data quality assessment for Stage 1 and Stage 2, the Data Quality Assessment Tool used in the assessment remained consistent, with minor amendments made following

Stage 1 to support the collection of additional data related to MBS claiming and the HDP. Stage 2 of the DQASP assessment considered whether services found the HDP meaningful in understanding their data and streamlining nKPI reporting. The questions focused on understanding the impact of the HDP in relation to the reporting burden and the accuracy of their data.

Though the key findings from Stage 2 mirrored or complemented the findings from Stage 1, the addition of new questions into the Data Quality Assessment Tool within Stage 2 of the assessment identified a small number of new findings. These are summarised below:

- Overall services noted their positive experience with the HDP, with most services (72 per cent) identifying the new data portal was easier to use than previous systems.
- Overall services in Stage 2 reported a decrease in reporting burden, it is expected this is due to services becoming familiar with the HDP and direct load process with less manual intervention required for reporting.

Opportunities for data quality improvement

This assessment found better practice approaches to data quality across services of differing size and remoteness level. However, while services generally value and make use of data, there is opportunity to lift maturity across the sector to achieve a Measured approach to data quality.

Achieving a Measured or higher level of maturity across the sector would require services to embed systems, processes and practices to support accuracy of reporting and to monitor and measure the effectiveness of data collection and quality, with the ability to actively intervene to support further improvement.

Realising this opportunity would enable all services to harness data to effectively understand community need, plan service delivery, monitor impact and continuously improve care for their community. It would also enable better informed, evidence based decisions, to improve the health of communities at a state and national level.

It is expected that reaching a Measured level of maturity across all services within the sector will be a two to five year goal. This timeframe recognises that some recommendations will take longer to implement, requiring higher levels of support to successfully embed changes across the sector, while others can be implemented more quickly.

Some, mostly Managed services, have identified and are implementing improvement opportunities that will result in a step change in their data management practices. These services are likely to require minimal additional support and should start to progress to a more mature approach over the next one to two years.

Other services, particularly those rated as Awareness or Repeatable, face significant operational and environmental barriers to achieving a more mature approach to data management and may therefore not easily be able to reach a mature level within the timeframe identified above.

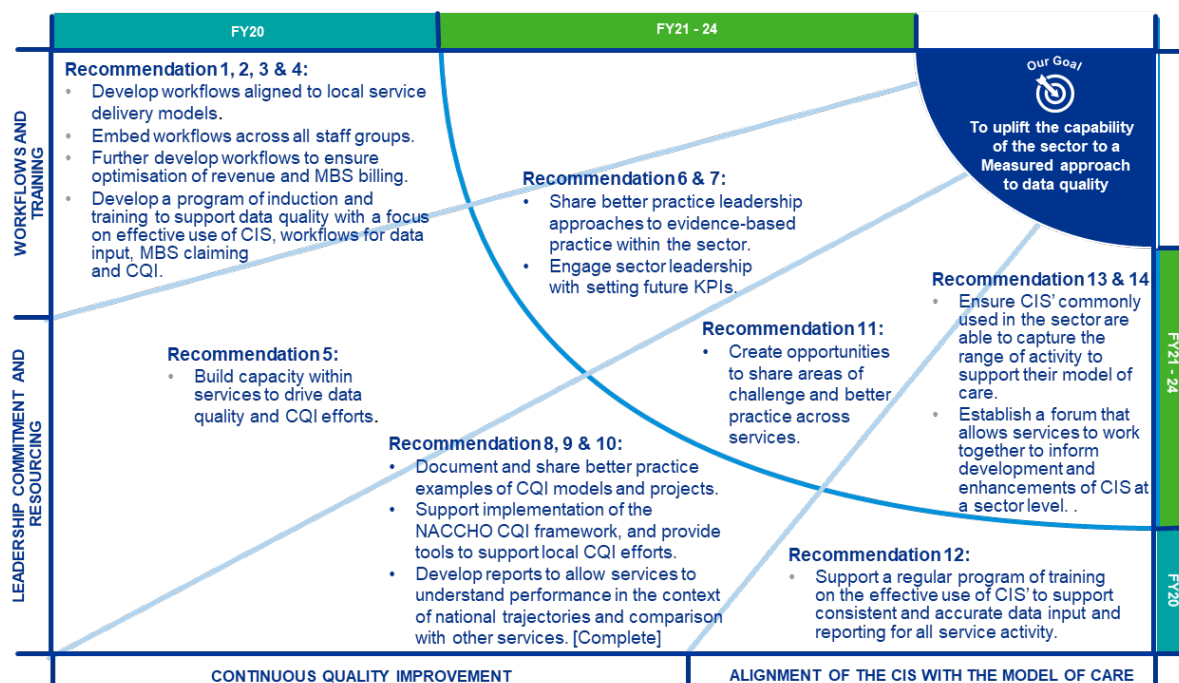
Targeted activities will support movement of the sector to a more mature approach to data quality, with the aim to get services to a Measured or Optimised level. This report highlights recommendations identified as high priority areas which are likely to have the greatest impact in assisting services to improve their maturity.

The roadmap at Figure 1 illustrates the high priority recommendations over two time periods, FY20 and FY21 - 24, against the overarching characteristics of a mature service. The full list of recommendations relating to common improvement opportunities identified during the data quality assessment is provided in Appendix A. The Department will engage with relevant stakeholders to implement the recommendations.

Key success factors to support the uplift of the sector include:

- A commitment from services (at the Board, Management, Clinical and Administrative level) to improving and maintaining data quality, including sharing better practice with other services.
- Services continuing to embed CQI processes across the sector.
- Support from CIS vendors to ensure all systems remain fit for purpose and deliver the data and information required to improve and maintain data quality.
- The Commonwealth Government to continue to provide ongoing funding and support to services.
- NACCHO and SSOs provide continued support to the sector in areas of data quality.
- Support being provided in a timely and ongoing manner to the sector.

Figure 1. Roadmap to uplift the capability of the sector to a Measured approach to data quality



Source: KPMG

Summary of recommendations for MBS claiming improvement

This assessment found that most services effectively claim for activity delivered by GPs. Whilst most services deliver follow up care to their patients as part of their comprehensive model of care there is opportunity to improve claiming for this activity. The opportunity to improve claiming for referred allied health is more limited as a result of the workforce model employed by most services.

These findings are reflected in the targets each service set for their own improvement. The individual reports provided to each participating service provide recommendations to support the achievement of these targets.

This section sets out additional recommendations which:

- Target barriers to effective claiming across the sector; or
- Address additional support, education and incentives required to lift the maturity of all services.

These recommendations are considered to be preparatory to improving the maturity of services and the sector as a whole and recognise that some services will require additional support. Other services face significant operational and environmental barriers, including highly transient populations and a lack of a medical workforce, to achieving a more mature approach to MBS claiming.

For this reason, the potential to improve MBS claiming across the sector should be sensitive to the variability in maturity as well as factors, including number of clients and degree of remoteness, outside the control of services.

A consolidated list of all MBS claiming improvement opportunities outlined in this report is provided in Appendix B.

Table 2. Recommendations for providing support to services to appropriately claim Medicare entitlements

Number	Recommendations
E2	Systems and processes
E2.1	Consider opportunities to pool specialist MBS support for education and training along with review and audit of claiming for small services.
E2.2	Build on the Medicare Liaison Officer and Business Development Officer model to increase access to and improve the consistency, quality and cultural appropriateness of advice to services.
E2.3	Consider whether the s19 (2) guidance in relation to allied health services requires amendment or clarification to reflect workforce models commonly used across the sector.
E2.4	Continue to develop and provide written guidance to services on the workflow to support effective claiming for items specific to providing care to Aboriginal and Torres Strait Islander clients tailored to each provider type. Consider appropriate channels for distribution.

Number	Recommendations
E2.5	Provide written guidance on eligibility to claim with a particular focus on Aboriginal Health Worker and Aboriginal and Torres Strait Islander Health Practitioner roles. Consider appropriate channels for distribution.
E2.6	Provide clarity on the most appropriate resource for services to check eligibility criteria and claiming rules.
E2.7	Develop and implement education resources for GPs working within the sector on the purpose of and the process to support health assessment follow up.
E2.8	Develop and implement a program of training, supported by available Department of Human Services (DHS) education resources, for GPs working within the sector on the purpose of and the process to support health assessment follow up.
E2.9	Develop templates for GP use, appropriate to each CIS, to support follow up care and referral to allied health services following a health assessment.
E2.10	Develop and implement a program of training for Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners on MBS and effective claiming.
F2	Leadership and organisational culture
F2.1	Support services to share better practice approaches to MBS claiming across the sector.
F2.2	Facilitate a discussion across the sector on the role of MBS reimbursement in supporting sustainable service delivery.
F2.3	Provide services with access to data to benchmark their claiming performance against peers.
F2.4	Consider the use of MBS data in CQI frameworks and tools to support a greater understanding of service effectiveness in delivering planned care.
F2.5	Provide services with access to training resources for MBS claiming as well as provide advice on better practices for professional development across all staff groups (e.g. ongoing education, periodic training opportunities).
G2	Service delivery and workforce model
G2.1	Provide guidance to services on the accreditation requirements for Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners.
G2.2	Support services to identify appropriate education and training providers in their area.
G2.3	Investigate the potential for a 'syndicate purchase' for remote services in order to create the critical mass to bring a trainer to the area (rather than send trainees away from community).

1. Overview of the assessment

1.1. Introduction

In January 2018, the Commonwealth Department of Health (the Department) engaged KPMG to undertake an assessment of Aboriginal Community Controlled Health Services (services) data collection practices and provide support and recommend (where appropriate) areas where the service might be able to improve data management and reporting practices. A wider aim of the assessment was to identify high level themes to assist and support the Aboriginal Community Controlled Health Sector (sector) as a whole.

In December 2018, the Department engaged KPMG to continue a second stage of work with the focus of investigating overall improvements in data management practice in response to the challenges identified in Stage 1. Stage 2 including the following elements:

- Activity 1: Follow up consultations with 21 Stage 1 services.
- Activity 2: Continue data quality site visits at 21 services.
- Activity 3: Undertake 15 site visits to assess improvements for claiming from the Medicare Benefits Schedule (MBS).

Activity 1 of the project provided an opportunity for services involved in Stage 1 to complete a follow up consultation, to identify where services have improved their data collection practices since the assessment in Stage 1, and determine where services are experiencing barriers or challenges, and may require further support.

Activity 2 allowed services that did not participate in the first stage of the project to benefit from opportunities to improve data collection and provided an opportunity to see whether the themes identified in the first stage of the project were consistent across other services and within the sector.


In addition to continuing with site visits to assess data quality across more services, the second stage of the project offered a sample of services the opportunity to participate in an MBS Activity, Activity 3. The impetus for the MBS activity included the following factors:

- During the first stage of the project a number of services discussed the challenges that they face in ensuring that MBS reimbursements are claimed for all eligible activity.
- During the first stage of the project, KPMG also identified a number of better practice approaches to MBS claiming (e.g. MBS targets for a range of item numbers and consistent workflow for claiming).
- As part of the 2018-19 Budget, the Department signalled that it would be incentivising services to claim eligible MBS entitlements.

1.2. Assessment methodology

The approach to the assessment recognised that data quality is multidimensional. For this reason, an assessment tool was developed for the data quality assessment and the MBS activity, informed by Australian Bureau of Statistics (ABS) data quality dimensions. The tool supported analysis and assessment of the data maturity of each service along a five point continuum ranging from Awareness (the lowest level of maturity) to Optimised (the highest level of maturity), as provided in Figure 2 below. The maturity rating continuum is discussed in detail in Section 3.1.2.

Figure 2. Overall assessment ratings

Key: Overall Assessment Ratings					
	AWARENESS	REPEATABLE	MANAGED	MEASURED	OPTIMISED
	Key operational processes are unknown, there is little structure and/or control in undertaking them	Standardised processes exist, there is some consistency in approach	A consistent set of policies and procedures exist to manage operational elements of data quality, with clear process ownership	The service monitors and measures the effectiveness of data collection and quality, with active interventions to support further improvement	The service focusses on optimisation of its processes to take account of changing needs and external factors, actively anticipating future requirements

Source: KPMG

Each activity involved analysis of relevant data and consultation with services, either via a site visit or phone consultation using interviews, document reviews and recording of observations.

Following the site visit or follow up call, the service was provided with a summary report outlining the key observations, better practice, and areas for improvement, their maturity assessment rating for each area of focus, and an overall assessment rating.

A detailed assessment methodology for each activity is outlined in the relevant sections of the report.

1.3. Background and context

The sector has specific reporting obligations to the Department, as a result of the funding that they receive under the Indigenous Australians' Health Programme (IAHP), including submitting their annual Online Service Reporting (OSR) and bi-annual national Key Performance Indicators (nKPI) reports. Health care data has increasingly become digitised, including through the adoption of Clinical Information Systems (CIS). Many services are now able to prepare their nKPI reports through an entirely electronic process, the recently launched Health Data Portal (HDP).

The HDP was launched by the Department in 2016 as a standalone file sharing website to simplify health data reporting for services. In 2017, nKPI reporting transitioned to the HDP, making it possible for services to directly load their nKPI data from their CIS. The HDP is being further revised to improve the OSR reporting experience. A multi-stage implementation for the OSR commenced from 1 July 2019.

In October 2015, the Australian Government released the Implementation Plan for the National Aboriginal and Torres Strait Islander Health Plan 2013-2023 (the Implementation Plan). The Implementation Plan outlines the actions to be taken by the Australian Government, the sector and other key stakeholders to give effect to the vision, principles, priorities and strategies of the National Aboriginal and Torres Strait Islander Health Plan 2013-2023¹⁶. The Implementation Plan has set goals to be achieved by 2023 for 20 indicators, of which seven indicators were the focus of this assessment, relating to five nKPIs¹⁷. The nKPIs capture process of care and health outcome data focused on maternal and child health, preventative health and chronic disease management. The nKPIs provide a measure to assist services to improve the delivery of primary health care services by supporting continuous quality improvement (CQI) activity. Refer to Section 3.3.4 for further detail of the nKPIs in scope for this assessment.

The National Aboriginal Community Controlled Health Organisation (NACCHO) is the national peak body representing the sector in Australia. NACCHO has eight Sector Support Organisations (SSOs)¹⁸, who represent the services in Australia in their respective State or Territory. NACCHO and the SSOs were consulted during the assessment. CIS vendors were also consulted during the assessment. In January 2019, NACCHO published their CQI framework which is designed to provide principles and guidance for all primary healthcare organisations in how to do, support and inform culturally respectful CQI¹⁹. The framework was developed in consultation with Aboriginal Community Controlled Health Services and SSOs, health professional organisations and government.

Stage 2 of the assessment incorporated the MBS activity, which aimed to identify key enablers and barriers to MBS claiming for services. Services are able to both claim MBS whilst also receiving Government funding via the IAHP because they have an exemption to s19(2) of the *Health Insurance Act 1973* which otherwise precludes the payment of MBS benefits for professional services if an agreement with a Local, State or Commonwealth Government is already in place.

Services are funded through a range of sources including IAHP, grants from Primary Health Networks (PHNs) and state government funding. As part of the 2018-19 Federal Budget, the Department announced that the Funding Model development and modelling will progress without an nKPI component. The Department committed to exploring alternative service provider capability measures in consultation with the sector.

The Department also announced that IAHP funded services, which are in-scope for the Funding Model, will be supported to consistently seek Medicare entitlements for the relevant services they provide. The accessibility of both government funding and MBS reimbursements has created a degree of funding certainty which has allowed services to operate in areas where a fee for service model is not viable and to provide a comprehensive model of care not fully supported by MBS reimbursement.

¹⁶ Australian Institute of Health and Welfare. 2018. [*Tracking progress against the Implementation Plan goals for the Aboriginal and Torres Strait Islander Health Plan 2013-2023*](#). Accessed on 21 June 2018.

¹⁷ These nKPIs correspond to Category A nKPIs which are process-of-care indicators and generally accepted to have good quality data.

¹⁸ Sector Support Organisations (SSOs) were previously termed Affiliates.

¹⁹ NACCHO, 2019. [*NACCHO publication to assist building capability in CQI*](#).

The Health Services Data Advisory Group (HS DAG) and the Funding Model Advisory Committee (FMAC)²⁰ provided input into the scope of the project and were kept informed on the progress of the assessment.

1.4. Scope

The objective of the assessment for each of the three key streams of work are outlined below, with area of focus followed by objective.

Stage 1 & Stage 2 Site Visits

- Data management: Establish the extent to which the health services have effective mechanisms to articulate their data requirements and to support their workforces to sustainably produce high quality data.
- CIS: Establish whether the health services have optimised or configured their CIS, and the extent to which these impact data quality. The CIS in scope for this assessment were MedicalDirector, Best Practice, Communicare and MMEx.
- EoC and CC: Establish whether the health services processes for capturing data used in the EoC and CC are reasonable and whether there is a justifiable basis for the reported counts.
- nKPI data quality: Assess the quality of the values reported for the seven data items from the relevant nKPIs. The five nKPIs in scope were:
 - PI 03: Proportion of Indigenous regular clients for whom a Medicare Benefits Schedule (MBS) health assessment for Aboriginal and Torres Strait Islander People (MBS item 715) was claimed (9-12 months).
 - PI 05: Proportion of Indigenous regular clients with type 2 diabetes who have had an HbA1c measurement result recorded (12 months).
 - PI 14: Proportion of Indigenous regular clients aged 50 and over who are immunised against influenza (12 months).
 - PI 18: Proportion of Indigenous regular clients with a selected chronic disease who have had a kidney function test (12 months).
 - PI 23: Proportion of Indigenous regular clients with type 2 diabetes who have had a blood pressure measurement result recorded (6 months).

²⁰ FMAC has been superseded by the Comprehensive Primary Health Care (CPHC) Sustainability Advisory Committee (SAC)

Stage 1 follow up consultation

- **Improvements:** Establish whether services have successfully implemented the areas for improvement identified during Stage 1, and the extent to which services self-assess an improvement in their data quality processes.
- **Enablers:** Establish the key enablers that support services to implement the areas for improvement identified during Stage 1, and improve their overall data quality maturity.
- **Barriers:** Identify the challenges or barriers services have experienced when trying to implement the areas for improvement identified during Stage 1.

MBS activity

- **Systems and processes:** Establish whether the systems and processes are in place to support consistent and accurate MBS claiming for eligible activity.
- **Leadership and organisational culture:** Establish whether the leadership and other staff in the organisation demonstrated a commitment to the importance of MBS reimbursement for supporting the delivery of primary health care that meets the needs of the local population.
- **Service delivery and workforce model:** Establish the extent to which the cycle of care and preferred service delivery was known by all staff and what MBS items could be associated with activities within the cycle of care.

The assessment also sought to identify opportunities for improvement in three ways:

- **Opportunities for local improvement** - Identify and make recommendations on data improvement opportunities for each health service.
- **Opportunities for national education and support** - Identify opportunities for development and delivery of education and support for health services, including options for sharing good practice within the Indigenous health sector.
- **Opportunities for eligible MBS claiming** – Identify key enablers to effective MBS claiming, including options to support and incentivise services to claim eligible MBS entitlements.

The scope of the assessment did not seek to determine the accuracy of service OSR and nKPI reports, but rather to understand service data collection practices and identify areas where the service may be able to improve data practices. An individualised report was provided to each service that participated in the activities outlined above.

2. Stage 1 Follow Up

2.1. Follow up consultation approach

2.1.1. Overview

All services that participated in the data quality assessment in Stage 1 were invited to participate in a two hour Stage 1 follow up consultation. Consent to be involved in the follow up consultation could be withdrawn at any time. Of the 53 services that completed an assessment in Stage 1, 21 services completed a follow up consultation. The follow up consultations were completed between March and May 2019, approximately one year after the Stage 1 data quality assessments were completed.

The follow up consultations focused on the following areas:

- Understanding where services have successfully implemented the areas for improvement identified during Stage 1.
- Understanding any challenges or barriers experienced by services when trying to implement the areas for improvement identified during Stage 1.
- Exploring if the services have experienced a change in the accuracy of their 2017-18 OSR and nKPI data reporting.

Following the Stage 1 follow up consultation, a summary report was prepared for each service, outlining:

- The services self-assessed maturity ratings for each area of focus, and self-assessed overall maturity rating.
- Progress against each area for improvement identified in Stage 1.
- Improvements made to data quality since the assessment was completed in Stage 1.
- Challenges identified and/or barriers for implementing the areas for improvement identified in Stage 1.

Each service had the opportunity to review their draft report to ensure the information was accurately captured before the report was finalised.

2.1.2. Follow up consultation method

A two hour consultation was completed with staff from the service (e.g. executive, clinical). A standardised set of questions was used to guide the consultation, with conversations tailored for each service to investigate progress for each area for improvement identified in Stage 1.

The consultation was supported through using 2017-18 OSR and nKPI data to explore reasons for any change (or no change) in the reported values, and explore if the service believes there has been a change in the accuracy of the reported data.

The service completed a self-assessment of their maturity against the four areas of focus (Data Management, CIS, EoC and CC, and nKPI data quality), with an overall maturity assessment self-rating then determined. The

service self-assessed their maturity using the same five point assessment model used in the data quality assessment in Stage 1. Refer to Section 1.2 for the assessment maturity ratings. KPMG challenged the service through the consultation, to ensure there was sufficient reasoning provided by the service for their self-assessed rating.

2.1.3. Limitations of the sample

A Stage 1 follow up consultation was completed for 21 of the 53 services that participated in the Stage 1 data quality assessment, representing 40 per cent of services from Stage 1. The observations below therefore represent a sample of services from the Stage 1 assessment, and do not reflect the experiences for all services that participated in the Stage 1 data quality assessment.

The consultations were completed in two hours. The focus of the assessment was on the service self-assessing their maturity, rather than KPMG completing an assessment. During the assessment KPMG sought to explore the rationale provided for the self-assessment. Each service was able to provide an evidence base for their response.

2.2. Summary assessment

Overall, 21 services participated in the follow up consultation, located in seven States and Territories in Australia. Table 3 and Table 4 outline the distribution of participating services by jurisdiction and remoteness level, respectively.

Table 3. Distribution of services by jurisdiction

Jurisdiction	Count	Percentage
NSW / ACT	3	14%
VIC / TAS	2	10%
QLD	5	24%
SA / NT	8	38%
WA	3	14%
Total	21	100%

Source: Commonwealth Department of Health, analysed by KPMG

Table 4. Distribution of services by remoteness level

Remoteness	Count	Percentage
Major Cities of Australia	3	14%
Inner Regional Australia	6	29%
Outer Regional Australia	3	14%
Remote Australia	4	19%
Very Remote Australia	5	24%
Total	21	100%

Source: Commonwealth Department of Health, analysed by KPMG

Table 5 outlines the distribution of CIS used by the participating services. The majority of the services involved in the assessment used Communicare.

Table 5. Distribution of CIS for services participating in the Stage 1 follow up consultation

CIS	Count	Percentage
Communicare	17	80%
MedicalDirector	2	10%
MMEx	2	10%
Total	21	100%

Source: Commonwealth Department of Health, analysed by KPMG

2.2.1. Progress of areas for improvement

Areas for improvement were provided to services during the Stage 1 data quality assessment, as either areas for immediate action or other areas for improvement. The follow up consultation identified that of the total 135 areas for improvement provided to the 21 services, 125 (93 per cent) were either in progress (69) or implemented (56). This is provided in Table 6 below.

Table 6. Status of areas for improvement identified during Stage 1

Status	Areas of Immediate Action	Other Areas of Improvement	Total	Percentage
Implemented	22	34	56	42%
In Progress	32	37	69	51%
Not implemented	4	6	10	7%
Total	58	77	135	100%

Source: KPMG

2.2.2. Maturity assessment ratings

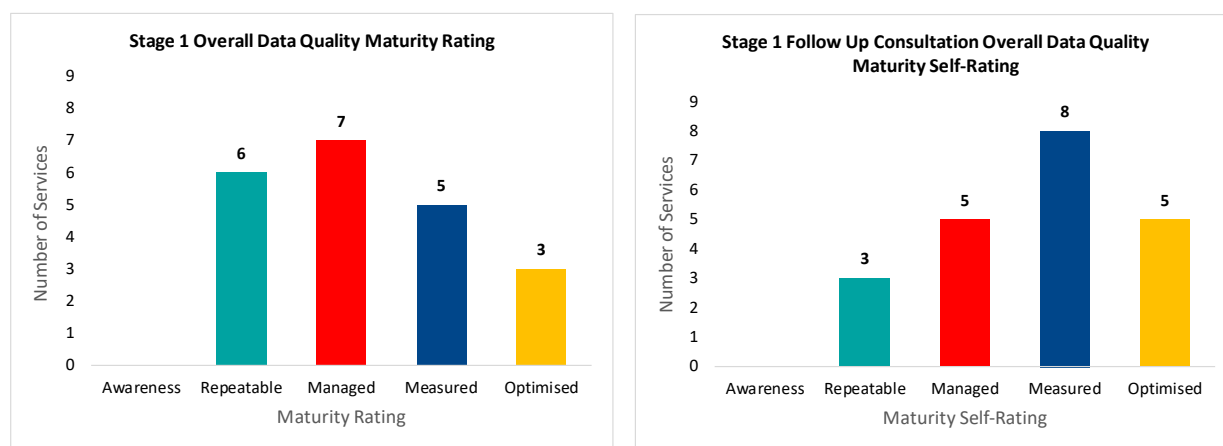
Overall maturity assessment results

Of the 21 services that completed the follow up consultation, three services received an Optimised rating (the highest possible) in Stage 1. Of the 18 services that could move along the maturity continuum:

- Ten services (56 per cent) self-assessed their overall maturity to have increased by at least one maturity rating than was received in the Stage 1 data quality assessment.
- The remaining eight services (44 per cent) self-assessed their overall maturity as the same maturity rating the service received in Stage 1.

Figure 3 below illustrates the distribution of overall maturity ratings for the 21 services involved in the follow up consultation, outlining the ratings received in Stage 1 and the self-ratings provided during the follow up consultation.

Figure 3. Overall maturity ratings for the Stage 1 assessment, and self-ratings for the follow up consultation, for the 21 services that participated in the follow up consultation.



Source: KPMG

For the sample of 21 services involved in the activity, eight services (38 per cent) had a mature approach to data quality in Stage 1, as the service received an overall rating of either Measured or Optimised. During the follow up consultation, 13 services (62 per cent) self-assessed their overall maturity rating as Measured or Optimised. This represents an additional five services (24 per cent) self-assessing that they have a mature approach to data quality, following improvements made since Stage 1.

One service self-rated an improvement from Repeatable to Measured, an increase of two maturity ratings. The service explained that this improvement was driven by progress made against all of the areas of improvement identified during Stage 1, which has included the service focusing on professional development of staff on how to use the CIS, embedding CQI processes within the service and implementing processes to share the data workload across staff.

Summary of movement in self-ratings for each area of focus

The overall movement in each area of focus is provided in Table 7 below, detailing the number of services that self-assessed their maturity rating to have improved by at least one rating, and the number of services that self-assessed their maturity to be at the same level as was received in Stage 1. No services provided a self-rating for an area of focus that decreased in maturity since that Stage 1 data quality assessment.

Overall, 12 services (57 per cent) self-rated their maturity for data management at a higher level than was received in Stage 1, which was the largest improvement identified of the four areas of focus. Of the nine services that rated their maturity at the same level as Stage 1, six of those services received a rating of Measured or Optimised in Stage 1, and were therefore demonstrating a mature approach to data management, making it harder to move up the maturity continuum.

The smallest improvement was experienced for the nKPI data quality area of focus, with only seven services (33 per cent) self-assessing their maturity rating at a higher level than was received in Stage 1. For the 21 services, the highest number of ratings for Measured or Optimised in Stage 1 were received for the nKPI data quality area of focus than the other three areas of focus, thus services were not able to move as easily up the maturity continuum.

Table 7. Movement of maturity ratings for each area of focus, from Stage 1 to the follow up consultation self-rating, for the 21 services that participated in the follow up consultation.

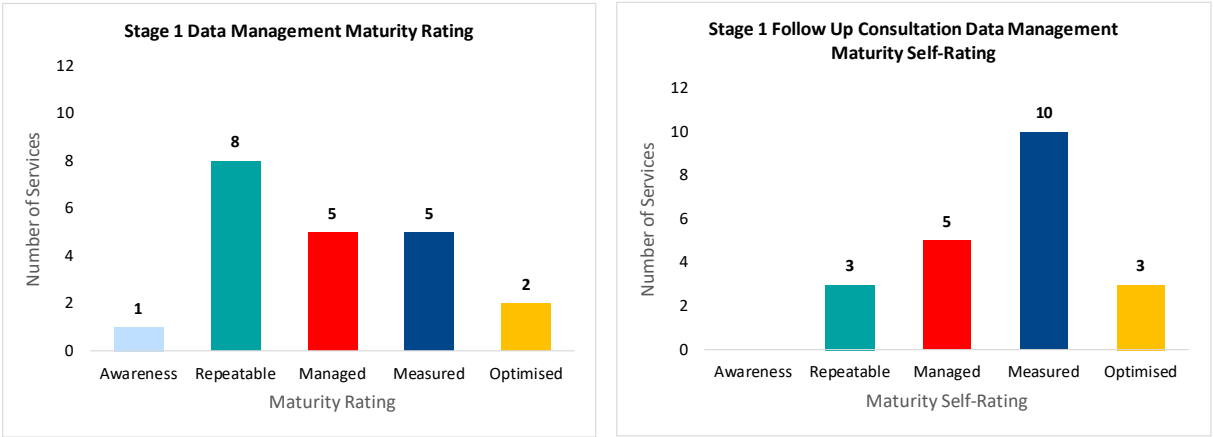
Area of Focus	Number of services that self-rated an improvement by at least one maturity rating	Services self-rating the same as Stage 1
Data Management	12	9
CIS	10	11
OSR	9	12
nKPI data quality	7	14

Source: KPMG

Summary of data management results

Figure 4 below illustrates the data management maturity ratings received during Stage 1 and the subsequent self-assessed maturity ratings provided during the follow up consultation. There has been a large improvement in the number of services assessing their maturity to be Measured or Optimised, moving from seven services (33 per cent) in Stage 1, to 13 services (62 per cent) self-rating at this maturity during the follow up consultation.

Figure 4. Data management maturity ratings for the Stage 1 assessment, and self-ratings for the follow up consultation, for the 21 services that participated in the follow up consultation.

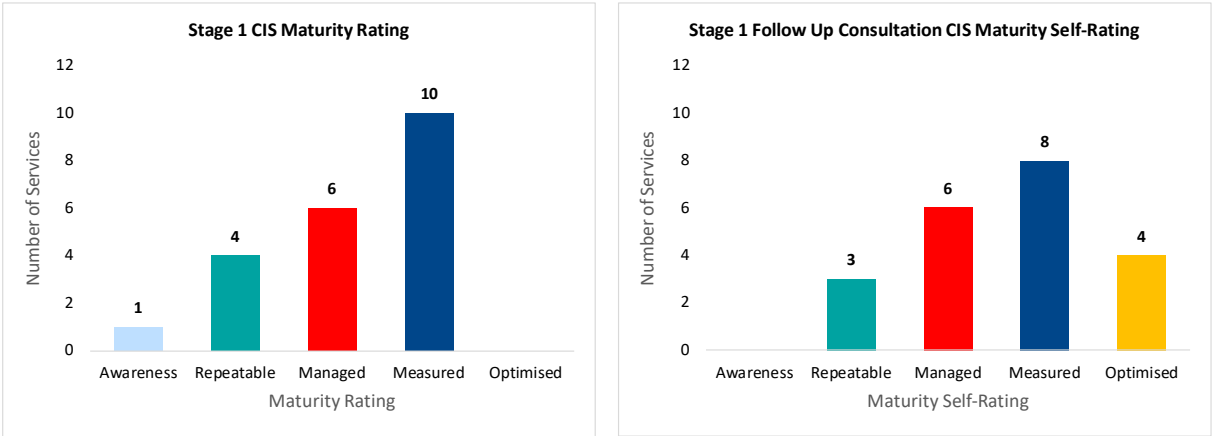


Source: KPMG

Summary of CIS results

Figure 5 below illustrates the CIS maturity ratings received during Stage 1 and the subsequent self-assessed maturity ratings provided during the follow up consultation. The number of services that self-assessed their maturity rating as either Measured or Optimised during the follow up consultation was 12 services (57 per cent), an increase from 10 services (47 per cent) that received a rating of either Measured or Optimised in Stage 1.

Figure 5. CIS ratings for the Stage 1 assessment, and self-ratings for the follow up consultation, for the 21 services that participated in the follow up consultation.

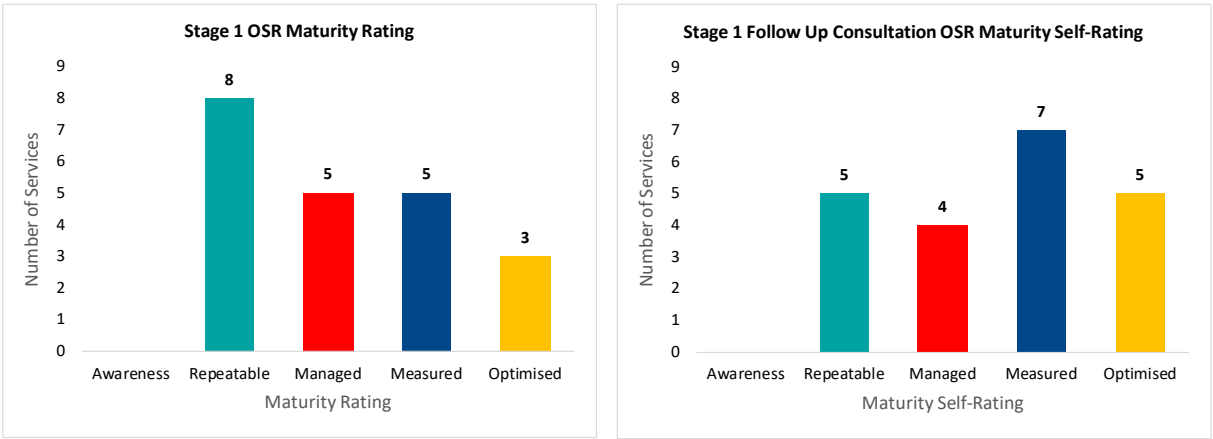


Source: KPMG

Summary of OSR results

Figure 6 below illustrates the OSR maturity ratings received during Stage 1 and the subsequent self-assessed maturity ratings provided during the follow up consultation. The number of services that self-assessed their maturity rating as either Measured or Optimised during the follow up consultation was 12 services (57 per cent), an increase from eight services (38 per cent) that received a rating of either Measured or Optimised in Stage 1.

Figure 6. OSR ratings for the Stage 1 assessment, and self-ratings for the follow up consultation, for the 21 services that participated in the follow up consultation.

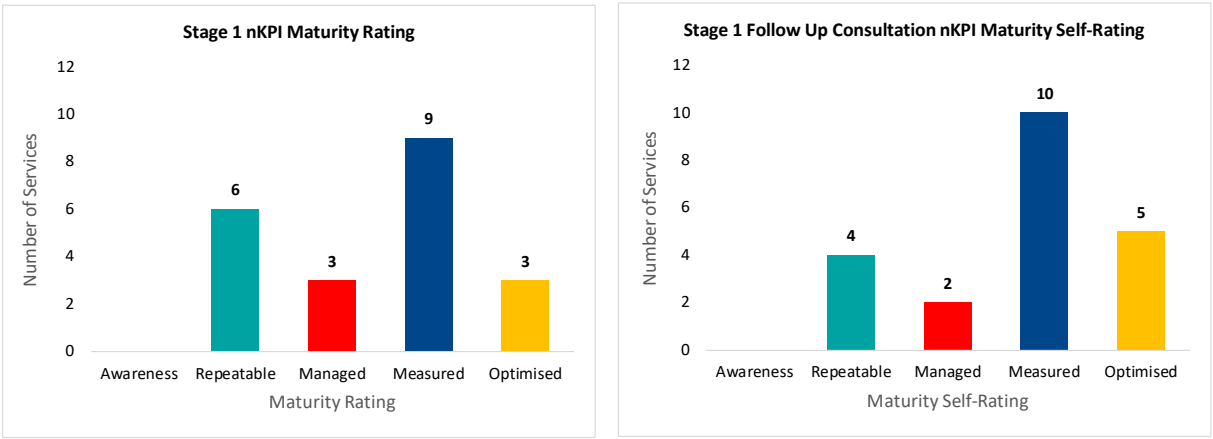


Source: KPMG

Summary of nKPI results

Figure 7 below illustrates the nKPI data quality maturity ratings received during Stage 1 and the subsequent self-assessed maturity ratings provided during the follow up consultation. The number of services that self-assessed their maturity rating as either Measured or Optimised during the follow up consultation was 15 services (71 per cent), an increase from 12 services (57 per cent) that received a rating of either Measured or Optimised in Stage 1.

Figure 7. nKPI data quality ratings for the Stage 1 assessment, and self-ratings for the follow up consultation, for the 21 services that participated in the follow up consultation.



Source: KPMG

2.3. Improvements made to data quality

Services reported significant improvements that have been made to data quality processes since the assessment was completed in 2018. Services explained that the assessment allowed them to identify how they were performing in relation to data quality, and key areas for improvement. A number of services explained that they believe their OSR and nKPI reporting is now more accurate, due to increased focus, improved data entry and reporting practices.

Some services acknowledged the assistance provided by SSOs and CIS vendors in helping to implement some of the areas for improvement.

The improvements made by services are summarised through the overarching characteristics of a mature service identified during Stage 1, demonstrating services journey along the maturity continuum:

- Leadership commitment and resourcing.
- Workflows and training.
- Continuous quality improvement.
- Alignment of the CIS with the model of care.

2.3.1. Leadership commitment and resourcing

Services reported that various processes have been implemented to build capacity within services to drive data quality and CQI efforts. This has included trying to improve the retention of staff within the service, improve the business continuity of the service in relation to data quality, and to employ additional staff who have a focus on data quality.

- **Initiatives to improve staff retention:** To reduce the impact of a high turnover of staff on the quality of data, some services have implemented initiatives to try to improve the retention of staff within the service.

In 2018, a very remote service conveyed that they have historically experienced significant staff turnover, with a high number of locums and visiting practitioners attending the service. The service explained that this has had an impact on data quality and clinical service delivery. The service has since changed the terms of staff contracts to try to improve staff retention. The changes include offering financial incentives for staff who work at the service for two years or more. This has seen an improvement in staff retention for the service.

- **Business continuity:** To reduce the reliance on key staff within a service, business continuity processes have been implemented or progressed at a number of services since the data quality assessment. This has involved developing individual succession plans for key roles, sharing the data workload across staff, and establishing delegates to ensure continuity of activities in the absence of the responsible person.

An area of immediate action was identified for a service with less than 1,500 clients, to progress current work in relation to succession planning for the management team. The service has since implemented succession planning strategies to manage the retirement of some members of the management team. The SSO has been engaged to provide support for recruitment and assisting with transition into the service.

- **Employing staff who have a focus on data quality:** Although not feasible for all services, employing an additional staff member or adjusting the existing roles within a service to enable an individual to focus on data quality, provided additional capacity for the service to make improvements to data quality following the Stage 1 assessment.

During Stage 1, an opportunity was identified for a service located in a major city to further refine and expand existing policies, procedures, training materials and data governance frameworks. The service has since engaged an additional Data Quality and Research Officer, who is undertaking work to update training materials and create program specific CIS user guides.

- **Using data to inform service planning:** Improved data quality processes, reporting practices and confidence in the accuracy of the reported data has enabled services to use clinical data to better inform service delivery.

An outer regional service with multiple sites previously submitted OSR and nKPI data through one consolidated report. The service has now successfully reported on their clinics separately as children sites. The service explained that this has been valuable for informing resource allocation across their clinics, enabling the service to more effectively meet service demand.

Following the Stage 1 assessment, an inner regional service has now included reporting on clinical data as a standing agenda item to the Board of Directors meetings. This has helped to ensure that clinical data is used to inform organisational planning at the highest level of the organisation.

2.3.2. Workflows and training

Services reported that significant progress has been made to enhance the capability of staff, which has included developing workflows, providing further training and support to staff and developing documentation to improve knowledge and support consistent practices. Additionally, by increasing education to staff on the importance of data quality, services explained that staff have placed greater importance on ensuring that data is entered accurately, which services believe has had a positive impact on their data quality. This includes:

- **Staff received targeted training and support to improve their knowledge and capabilities:** Support has been provided to services to improve data entry, data extraction and reporting, which has included:

- Implementing or strengthening processes for induction training, to ensure all staff receive training on the CIS and appropriate workflows at the start of their employment.

In Stage 1, a very remote service identified the need to improve induction training to ensure there was a clear and consistent understanding of clinical and data management practices and to improve familiarity with the CIS. The service now provides induction training to all new staff in how to use the CIS, with follow up training provided within the first month of employment. The service are currently developing supporting documentation, such as flowcharts and checklists, to ensure staff having a consistent understanding.

- Ongoing training for both clinical and administrative staff on how to accurately enter data into the CIS. This has included developing and embedding workflows for data entry, to ensure accurate data for OSR and nKPI reporting.
- Providing support and training to staff on a regular basis to improve data quality practices.

An inner regional service were under-reporting activity within the OSR as there were no consistent workflows in place to consistently capture social and emotional wellbeing (SEWB) activity. The service has since focussed on data quality with the SEWB team. This has included completing one-on-one meetings with staff, to ensure staff understand how to use the CIS. The service has also developed clinical items to support reporting. The service has self-rated an improvement in overall maturity, from Repeatable in Stage 1 to a self-assessed rating of Measured in the follow up consultation.

A service with more than 4,501 clients considered that their client data may have been understated in 2016-17 as a result of some activity not being recorded in the CIS. The service has since worked closely with their SSO to establish and embed workflows across all staff groups to support accurate reporting. The service has made concerted efforts to improve the understanding of the appropriate workflows for data entry for all staff groups through regular discussion at staff meetings as well as providing role specific guidance. Regular support, training and monitoring is also provided to all staff in relation to workflows. The service explained that this has had a positive impact of increasing MBS income and increasing the number of care plans completed.

- Super-user training for some staff members on how to effectively use the CIS. This has meant less reliance on vendors to make configurations or develop bespoke reporting, and made it quicker to get the information the service needs to improve patient outcomes.

A service with less than 1,500 clients had two staff complete super-user training for the CIS since the site visit, and subsequently commenced providing improved training for new and existing staff to support the accurate use of the CIS. The service explained that the improved training on the CIS for staff has resulted in a greater awareness of obligations of staff in using the CIS to capture and report accurate client data.

A very remote service has developed additional CIS resources to support training of new staff and support existing staff, in more accurately capturing and reporting client information. The service believes their nKPI reporting is more accurate due to the additional support provided.

- Education for staff on the importance of data quality, and how this aligns with the model of care of the service.

An inner regional service improved their nKPI reported results for five of the seven in-scope data items, from 2016-17 to 2017-18. The service explained that this improvement was driven by increased education on the importance and relevance of nKPIs to their model of care. For example, the service provided education on flu shots to the community, including showcase days focused on providing the flu shot. The data item PI 14 (Flu shot 50+ years) increased by 20 per cent between 2016-17 and 2017-18.

- **Developing documentation to support consistent practices:** Services made significant progress documenting existing processes and procedures, and developing templates to guide consistent workflow.

Services also completed work documenting CIS configurations, to ensure that staff within the service have a consistent understanding of the CIS configurations in place.

In 2018, a remote service commenced an intensive induction program for new staff, which included instruction on data input. An opportunity was identified to develop documentation to support the training of new staff to ensure staff had access to assistance and ensure business continuity. The service has since strengthened this process by creating orientation booklets and documenting workflows in flowcharts.

A very remote service has undertaken significant work to document data management processes, in the development of user guides for staff. A new system has also been implemented for staff to access training and support materials, including data quality guidance. The service believes that the additional training and support provided to staff has resulted in their OSR data being more accurate than in previous years.

In Stage 1, an inner regional service had some configurations within their CIS, to provide for easy access to appropriate clinical codes. An opportunity was identified during Stage 1 to document the CIS configurations, to ensure they were clearly understood. The service has now documented the CIS configurations, including how the clinical items map to reporting. This documentation has been provided to key staff within the service, to ensure that staff understand the CIS configurations in place.

2.3.3. Continuous quality improvement

Services reported that they have implemented CQI processes through a number of mechanisms, to continue to drive improvements in the data quality maturity of their service. These include:

- **Implementing formal CQI processes:** Services have implemented a formal CQI Committee to provide a process to help embed CQI within the service.

During Stage 1, an area for improvement was identified for a service with less than 1,500 clients, to embed a CQI process that continues to improve the quality of OSR and nKPI data reporting. Since the data quality assessment, the service has implemented a CQI Committee. The CQI Committee includes administrative staff, clinical staff and management, and provides a forum where data, policies and procedures are reviewed, updated and communicated if required.

- **Introduction or strengthening of clinical governance meetings, with a focus on data quality:** A number of services have either implemented or strengthened their existing clinical governance meetings, to have a stronger focus on data quality. Services explained that this has assisted by showing data back to staff to improve their awareness of how the service is performing, and has created a forum to provide feedback to staff on how to improve their data entry practices.

To increase focus on CQI processes following the data quality assessment, a service with more than 4,501 clients established monthly clinical governance meetings, creating a standing data and reporting agenda item for all senior team meetings. This also provided a forum for involving all staff in the review of data. The service believes that their nKPI reporting is now more accurate as a result of the CQI processes they have put in place.

- **Implementing or strengthening existing audit or review processes:** Services have implemented or strengthened existing audit or review processes to identify where improvements could be made to data quality.

During the data quality assessment, an outer regional service explained that the client and EoC data in the OSR report may not have been accurate, as there were challenges around data cleansing associated with transitioning to a new CIS. The service has since expanded their practice of undertaking regular and systematic audits, to undertake spot audits of the system to cleanse the data and ensure that it is up to date and accurate. Through a combination of providing additional training and support to staff, the transition to the new CIS and completing the spot audits, the service believes the OSR data is now more accurate.

2.3.4. Alignment of the CIS with the model of care

Services reported that they have improved their ability to accurately capture and report on data, by completing work to ensure alignment of their CIS with the model of care of the service. Some services received support from their CIS vendor to configure or better understand the functionality of their CIS, to ensure that data can consistently and accurately be captured in the CIS.

In Stage 1, an opportunity was identified for a service with less than 1,500 clients, to continue to review the configuration of the CIS to ensure it is configured as effectively as possible for the service. The service has since better configured the CIS to the needs of the organisation, through adding more reports within the CIS to help with data collection and reporting.

In Stage 1, an opportunity was identified for a service located in a major city, to ensure that reporting to support local needs could be extracted directly and efficiently from the CIS. Some teams were relying on databases as they experienced difficulties extracting relevant reporting from the CIS, which created an additional input burden and may impact on the completeness of the information in the CIS. The service has since worked with their SSO and CIS vendor to capture program activity within the CIS, replacing the need for a separate reporting tool.

2.4. Barriers to further improvement

The follow up consultations identified consistent barriers and/or challenges that services have experienced when trying to implement the areas for improvement. Overall, only 10 (7 per cent) of the total 135 areas for improvement provided to the 21 services have not been implemented, and 69 (51 per cent) are in progress.

Common barriers or challenges experienced by the services relate to:

- Lack of capacity.
- An unstable workforce.
- Staff engagement.

- Challenges experienced with the CIS.

2.4.1. Lack of capacity

Services indicated that lack of capacity was a main barrier and challenge to implementing the improvements to data quality.

- **Lack of workforce capacity:** Services reported that having appropriate time to implement some of the data quality improvements was a barrier, particularly when the service is busy. This was further impacted by:
 - Service obligations (e.g. preparation and completion of accreditation was extremely resource intensive).
 - Site capacity (e.g. site constraints impacted on workforce capacity and efficiency).
 - Factors impacting on the ability of the service to deliver planned care (e.g. an increase in the number of acute presentations impacted on the ability of the service to deliver planned care).

When services were asked to consider what additional support might assist them to overcome these barriers they identified that the availability of standardised templates and tools would help to implement improvements to data quality processes and policies. Services also indicated that they would like to leverage off other services that have existing processes and documentation developed, that demonstrate better practice in these areas.

An area for improvement was identified for a service with 3,001 to 4,500 clients, to develop documentation specific to OSR and nKPI data collection and reporting following a transition to a new CIS. Due to a lack of capacity from competing priorities, the service has not formally documented these policies and procedures. The service expressed that having access to standardised templates for policies and procedures would make the area for improvement easier to implement.

2.4.2. An unstable workforce

Services reported that an unstable workforce creates difficulties when working to improve the maturity of the data quality practices of the service.

- **High staff turnover:** A high staff turnover has led to an increased training burden for services, particularly for providing induction training to new staff. This has resulted in a delay for services in implementing improvements to data quality.
- **Challenges to recruit to key positions:** A delay in recruiting staff for key positions is a challenge to implementing improvements to data quality.

A service with less than 1,500 clients experienced significant changes to their management team since the data quality assessment. The transition required a period of adaptation within the team, and slowed the implementation of previously identified opportunities for improvement.

2.4.3. Staff engagement

Services reported a challenge to implementing the areas for improvement was engaging staff in recognising the importance and value of data quality within the service, and the impacts more broadly for driving improvement within the service.

A service with 3,001 to 4,500 clients explained that staff buy in can be difficult at times, particularly where data quality is not seen as a priority for the service. The service has identified that some clinical staff groups require further work to improve their compliance with data requirements.

2.4.4. Challenges experienced with the CIS

Services reported common challenges with the CIS which impacted on services implementing some of the areas for improvement. The challenges were in relation to successfully upgrading the CIS, IT infrastructure issues, and ensuring that all activity is captured within the CIS. These include:

- **Upgrading the CIS:** A number of services have not upgraded to the latest version of the CIS, due to:
 - A vendor backlog with completing the upgrades.
 - Delaying the upgrade until issues with the CIS version are resolved.
 - Waiting until the service completes an upgrade of the current IT server, which is required to support transition to the latest version of the CIS.
- **IT infrastructure issues:** Services have experienced IT infrastructure issues, sometimes requiring the service to work offline for periods of time.

A very remote service continues to struggle with the degree of remoteness and connectivity issues. This is a significant impediment to the service to ensuring that activity across all clinics is accurately captured in the CIS in real time.

- **Capturing all activity within the CIS:** Services explained that there are difficulties with ensuring that all activity is captured within the CIS, and that configurations are mapped correctly for reporting.

A service explained they are unable to capture all of their activity, particularly in relation to programs, in the CIS. The service is exploring an alternative CIS, better suited to their model of care.

2.5. Recommendations

The following high priority recommendation has been developed in response to the challenge experienced by services around lack of capacity to improve data quality.

Table 8. Recommendations for further improvement

Number	Recommendations
A1	Information sharing
A1.1	Develop a platform (e.g. an online marketplace), whereby services can share better practice, policies, templates and tools with other services within the sector, and where services can express where further support is required.

3. DQASP Stage 1 & Stage 2

3.1. Assessment approach

3.1.1. Overview

The Stage 1 assessment involved a two day site visit at 53 services, where inquiry was undertaken on the four key areas of focus. Services had the opportunity to 'opt in' to the assessment. Consent to be involved in the assessment could be withdrawn at any time.

Prior to undertaking the site visits, two pilot site visits were completed to refine the assessment methodology. A further 51 services completed an assessment as part of the project.

The Stage 2 assessment involved a two day site visit to a further 21 services which opted in, where inquiry was undertaken on the same four key areas of focus.

The site visits focused on the following areas:

- Learning about the data capabilities, practices and procedures in relation to how services report OSR and nKPI data.
- Understanding how the CIS are set up and how they are used to input data and report.
- Identifying areas of strength, and any opportunities for data reporting improvement.

Following the site visit, a summary report was prepared for each service, outlining:

- The overall maturity rating.
- The maturity rating for each area of focus.
- Better practice identified.
- Key observations.
- Areas for improvement, which were distinguished as 'Areas for Immediate Action (as soon as possible)' or 'Other Areas of Improvement (to be considered for the future)'.

When identifying opportunities for improvement, the following areas of focus were considered:

- Opportunities for local improvement: identify and make recommendations on data improvement opportunities for each service.
- Opportunities for regional education and support: identify and make recommendations for development and delivery of education and support for services, including options for sharing good practice within the sector.

Each service had the opportunity to review their draft report to ensure the information was accurately captured before the report was finalised.

3.1.2. Assessment method

The assessment used a qualitative and quantitative process, taking into consideration a number of factors that are critical to accurate and consistent reporting of OSR and nKPI data. The inquiry for the assessment was undertaken at two levels, as follows:

- Quantitative analysis of services OSR data for the period 2016-17 (Stage 1) and 2017-18 (Stage 2) and their nKPI data for the period 2016-17 (Stage 1) and 2017-18 (Stage 2). As part of this analysis, the service's reported data was compared to their jurisdiction (OSR) and the 2016-17 national trajectories (nKPIs).
- A two day site visit at the service, where responses were collected for the assessment questions against each area of focus, using the following methods:
 - Interviews: interviews were undertaken with the executive and clinical staff, with a standardised set of questions guiding the interviews. Where appropriate, supplementary interviews were undertaken with additional staff at the service (e.g. administrative staff).
 - Documentation review: where documentation was available, a review of the documentation was undertaken by the assessment team. Documentation requested included data governance frameworks or policies and procedures regarding how the quality of data is managed, and supporting documentation for CIS users, such as the appropriate workflow for data entry or documentation of CIS configurations.
 - Observations: where appropriate, walkthroughs of the CIS was undertaken to understand data entry practices or CIS configurations undertaken.

Data Quality Assessment Tool

The approach to the assessment recognised that data quality is multidimensional. For this reason KPMG developed a Data Quality Assessment Tool (assessment tool) informed by the ABS data quality dimensions, set out below.

The assessment tool set out mandatory and explanatory questions, which were developed in cooperation with the Department and informed by consultation with CIS vendors, NACCHO, SSOs, and FMAC²¹ and HS DAG. The assessment tool was tested during two pilot site visits and further refined to reflect learning. Minor amendments were made to the tool following Stage 1 to support the collection of additional data related to MBS claiming and the HDP. Otherwise, the question set remained consistent between stages.

The assessment tool guided the collection of assessment data and analysis in a nationally consistent manner through:

- Mandatory questions, with set pre-defined response categories, to investigate whether a service demonstrated certain characteristics considered to be reflective of good data collection practices.

²¹ FMAC has been superseded by the CPHC SAC

Responses to these questions mapped directly to indicative ratings. Refer to Appendix B for the mandatory questions.

- Explanatory questions, which aimed to capture detailed supplementary information regarding service data collection practices and inform the assessment team when applying professional judgement to derive the final maturity ratings.
- Self-assessment questions, which provided the service an opportunity to self-assess their maturity having regard to their responses to the mandatory and explanatory questions and the definition of the maturity ratings.

The Australian Bureau of Statistics data quality dimensions

The dimension followed by the definition:


- Institutional environment: The institutional and organisational factors which may influence the effectiveness and credibility of the agency producing the statistics.
- Relevance: How well the statistical product or release meets the needs of users in terms of the concept(s) measured, and the population(s) represented.
- Accuracy: The degree to which the data correctly describe the phenomenon they were designed to measure.
- Interpretability: The availability of information to provide insight into data²².

Overall assessment maturity ratings

Following each site visit, responses to interviews and practices observed, captured within the assessment tool, assisted the team in forming the indicative ratings for each service. A consistency review was undertaken by a senior leadership team from KPMG to ensure a calibration of ratings across multiple teams, prior to the finalisation of ratings for each service. The five overall assessment ratings used to describe the maturity for each service for the four key areas of focus (Data management, CIS, EoC and CC, and nKPI data quality) and their overall maturity, are provided in Figure 8 below.

²² Australian Bureau of Statistics. April 2015. [The ABS Data Quality Framework](#). Accessed on 20 June 2018.

Figure 8. Overall assessment ratings

Key: Overall Assessment Ratings					
	AWARENESS	REPEATABLE	MANAGED	MEASURED	OPTIMISED
	Key operational processes are unknown, there is little structure and/or control in undertaking them	Standardised processes exist, there is some consistency in approach	A consistent set of policies and procedures exist to manage operational elements of data quality, with clear process ownership	The service monitors and measures the effectiveness of data collection and quality, with active interventions to support further improvement	The service focusses on optimisation of its processes to take account of changing needs and external factors, actively anticipating future requirements

Source: KPMG

3.1.3. Limitations of the sample

While regard was given to obtaining a sample of services representative of the characteristics of all services, including jurisdiction, remoteness and size, participation was voluntary.

In regards to the size of the service, the sample of participating services is not representative of the organisations providing primary healthcare as outlined in the 2016-17 OSR report²³ (refer to Table 9). The key difference is that the OSR report identified that half (50 per cent) of the organisations providing primary health care services had less than 1,501 clients, while only 30 per cent of the participating services in the assessment had less than 1,501 clients in their 2016-17 (Stage 1) or 2017-18 (Stage 2) OSR data.

Table 9. Distribution of services by OSR client count

Size (OSR client count)	Stage 1 Count (2016-17)	Stage 2 Count (2017-18)	Service per cent	2016-17 OSR service per cent
Less than 1,501 clients	13	9	30%	50%
Between 1,501-3,000 clients	13	7 ²⁴	27%	23%
Between 3,001-4,500 clients	15	1	43%	27%
More than 4,500 clients	12	4		
Total	53	21	100%	100%

Source: Australian Institute of Health and Welfare 2018²⁵ and the Commonwealth Department of Health, analysed by KPMG

²³ Australian Institute of Health and Welfare 2018. *Aboriginal and Torres Strait Islander health organisations: Online Services Report—key results 2016–17*. Aboriginal and Torres Strait Islander health services report no. 9. Cat. no. IHW 196. Canberra: AIHW

²⁴ Note: Client count was not available for one service. An estimate of size was made based on regular Indigenous clients reported in the nKPI.

²⁵ Australian Institute of Health and Welfare 2018. *Aboriginal and Torres Strait Islander health organisations: Online Services Report—key results 2016–17*. Aboriginal and Torres Strait Islander health services report no. 9. Cat. no. IHW 196. Canberra: AIHW

Overall the sample of participating services is broadly reflective of OSR Indigenous primary health care services for jurisdiction and remoteness levels, with the comparisons provided in Table 10 and Table 11 respectively. Differences identified were that WA and NSW / ACT services were over-represented, and NT services were under represented. Additionally, services within 'Major Cities of Australia' and 'Inner Regional Australia' were over-represented in the sample, whereas services located in 'Very Remote Australia' were significantly under-represented.

Table 10. Participating services by jurisdiction compared to the OSR 2016-17

Jurisdiction	OSR 2016-17 count²⁶	OSR 2016-17 per cent	Participating sample count	Participating sample per cent
NSW / ACT	43	22%	19	26%
VIC	24	12%	11	15%
QLD	27	14%	16	22%
WA	26	13%	13	18%
SA	13	7%	4	5%
TAS	7	4%	3	4%
NT	56	29%	8	11%
Total	196	100%	74	100%

Source: Australian Institute of Health and Welfare 2018²³ and the Commonwealth Department of Health, analysed by KPMG

Table 11. Participating services by remoteness compared to the OSR 2016-17

Jurisdiction	OSR 2016-17 per cent	Participating sample per cent
Major Cities of Australia	11%	14%
Inner Regional Australia	21%	34%
Outer Regional Australia	22%	24%
Remote Australia	13%	12%
Very Remote Australia	33%	16%
Total	100%	100%

Source: Australian Institute of Health and Welfare 2018²³ and the Commonwealth Department of Health, analysed by KPMG

²⁶ The number of services as reported in the 2016-17 OSR

3.2. Summary assessment

Overall, 74 services participated in the assessment across Stage 1 and Stage 2, located in all States and Territories in Australia. Table 12 and Table 13 outlines the distribution of participating services by jurisdiction and remoteness level, respectively.

Table 12. Distribution of services by jurisdiction

Jurisdiction	Stage 1 Count	Stage 2 Count	Percentage
NSW / ACT	15	4	26%
VIC / TAS	9	5	19%
QLD	10	6	22%
SA / NT	8	4	16%
WA	11	2	18%
Total	53	21	100%

Source: Commonwealth Department of Health, analysed by KPMG

Table 13. Distribution of services by remoteness level

Remoteness	Stage 1 Count	Stage 2 Count	Percentage
Major Cities of Australia	10	0	14%
Inner Regional Australia	15	10	34%
Outer Regional Australia	12	6	24%
Remote Australia	7	2	12%
Very Remote Australia	9	3	16%
Total	53	21	100%

Source: Commonwealth Department of Health, analysed by KPMG

Three CIS were in scope for Stage 1 of the assessment, which were Communicare, MMEx and MedicalDirector. An additional CIS was added into scope for Stage 2 of the assessment, which was Best Practice. Table 14 outlines the distribution of CIS used by the participating services. The majority of the services involved in the assessment used Communicare, followed by MedicalDirector.

Table 14. Distribution of CIS for services participating in the assessment

CIS	Stage 1 Count	Stage 2 Count	Percentage
Best Practice	0	5	7%
Communicare	36 ²⁷	9	61%
MedicalDirector	12 ²⁷	5	23%
MMEx	5	2	9%

²⁷ Note: In the Stage 1 report, two services were incorrectly classified as using Medical Director when they used Communicare. This has been updated in this report.

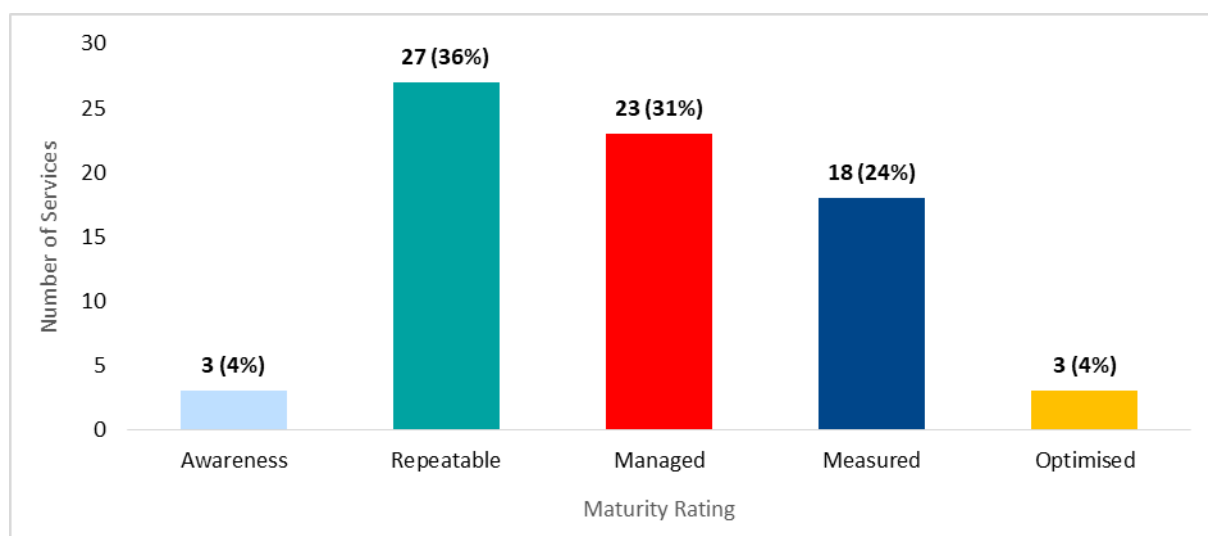
CIS	Stage 1 Count	Stage 2 Count	Percentage
Total	53	21	100%

Source: Commonwealth Department of Health, analysed by KPMG

3.2.1. Maturity assessment ratings

Of the 74 services that completed a data quality assessment in Stage 1 and Stage 2 (does not include consideration of services self-assessed rating provided during the Stage 1 follow up consultation), 68 were assessed as being either Repeatable, Managed or Measured. This means that only six services were assessed as either at an Awareness level (3 services) or at an Optimised level (3 services). This is presented in Figure 9.

Figure 9. Overall maturity ratings



Source: KPMG

As only three services received an overall Awareness and Optimised rating, in this report, the ratings have been grouped as:

- Awareness / Repeatable.
- Managed.
- Measured / Optimised.

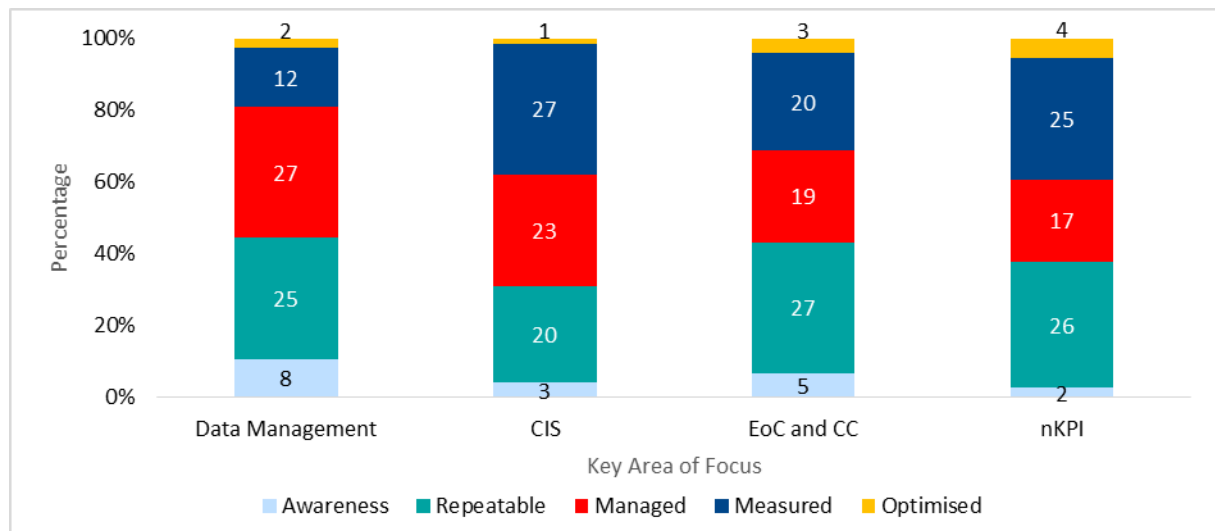
Additionally, there were only seven services that took part in the assessment from Tasmania and South Australia, and one from the Australian Capital Territory. To enable jurisdictional analysis to include all States and Territories, regardless of the number of participating services, we grouped jurisdictions with two or fewer services with geographically adjacent jurisdictions. For the purpose of analysis in this report, we have grouped jurisdictions as:

- NSW / ACT
- VIC / TAS

- QLD
- SA / NT
- WA

Figure 10 illustrates the summary of ratings by the key area of focus. Services generally performed consistently across domains, however of the four domains, the highest number of services (29 of 74) achieved Measured or Optimised under the nKPI domain.

Figure 10. Summary of ratings by the key area of focus

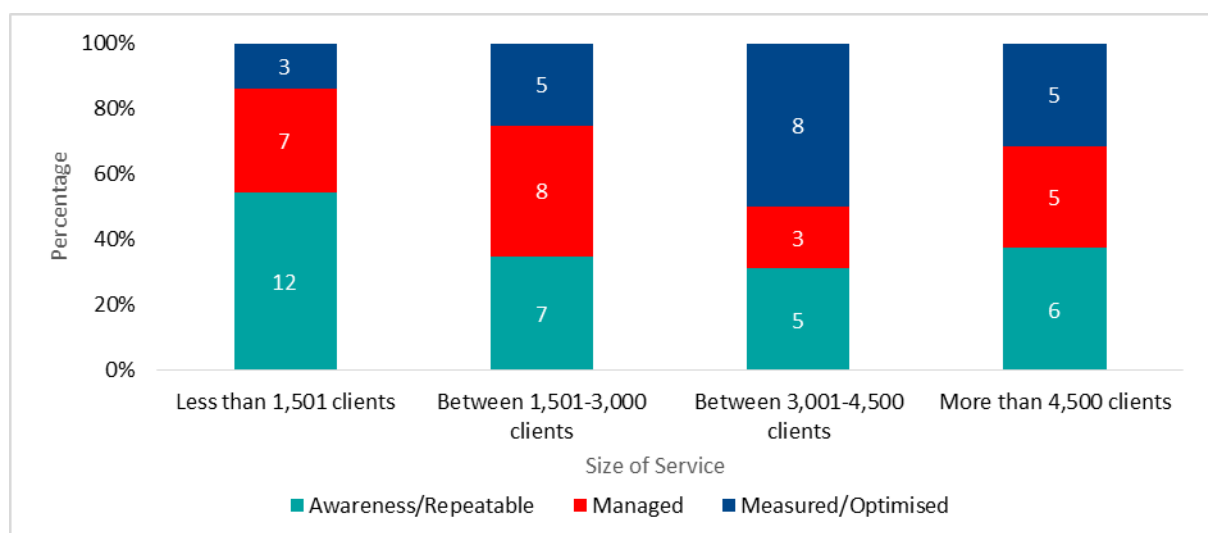


Source: KPMG

Refer to Appendix D.1 for a detailed breakdown of the analysis for the overall ratings to the characteristics of the service by jurisdiction, remoteness, size, CIS and the EoC to client ratio.

Summary analysis shows there appears to be a relationship between the overall rating and the size of the service and the CIS. As illustrated in Figure 11, of the 22 services with less than 1,501 clients, only three services had an overall Measured / Optimised approach to data quality.

Figure 11. Overall maturity assessment rating by size of the service

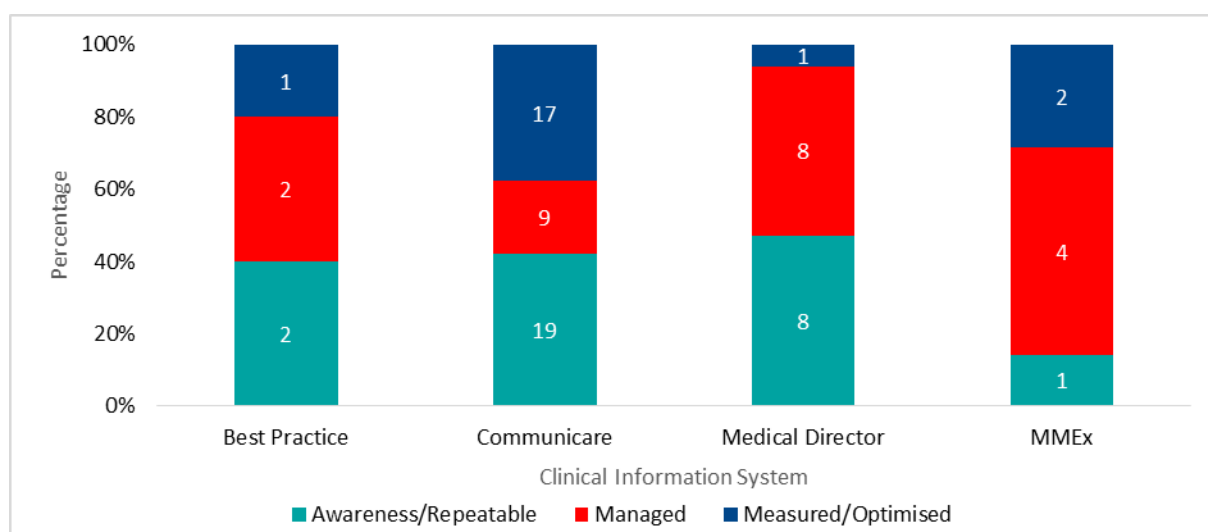


Source: KPMG

The majority of services (61 per cent) involved in the assessment used Communicare as their CIS. As illustrated in Figure 12, of the 21 services with a Measured / Optimised approach to data quality, 17 of those used Communicare. Although 17 services used MedicalDirector as their CIS, notably, only one service had a Measured / Optimised approach to data quality.

Most services using Communicare indicated that the ability to configure the CIS supported more accurate data capture, assuming that all configurations had been mapped to appropriate qualifier codes. Services using other CIS identified challenges with data capture for example, service staff captured information into free text which does not map to the correct qualifier code. Further information on services experience with the CIS is provided in Section 3.3.2.

Figure 12. Overall maturity assessment rating by CIS



Source: KPMG

3.2.2. Comparison with Stage 1 assessment

Overall, the key findings were comparable across both stages of the assessment. There are some differences across the samples which should be noted:

- The sample of Stage 2 sites included more remote and regional services and less major cities than those visited in Stage 1.
- The Stage 2 sample had a greater weight of services with less than 1,501 clients.
- An additional CIS was included within the scope of the Stage 2 assessment, Best Practice. Overall findings related to this CIS were similar to findings for services using MMEx and MedicalDirector. The key difference faced by services using Best Practice was difficulties experienced in reporting their OSR data. It was identified that this was due to challenges with the direct load process which is expected to be addressed in the 2018-19 OSR reporting cycle.

3.3. Observations by key areas of focus

This chapter provides an analysis of themes relating to each of the four domains of inquiry, identifying the characteristics and challenges to a mature approach as well as common recommendations. The chapter draws analysis and observations from the total sample of 74 services, consulted over both Stage 1 and 2 of the DQASP.

3.3.1. Data management

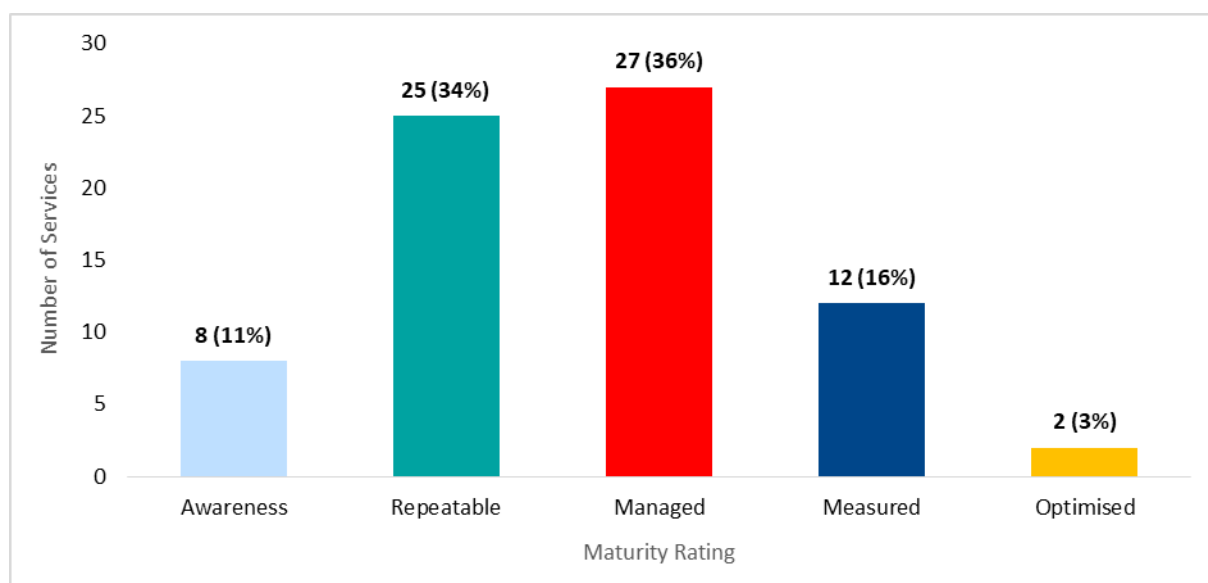
The focus of the data management domain was on exploring the culture, systems and processes to support the sustainable production of high quality data and its use to understand and continuously improve service delivery. This was explored using a qualitative process of interviews and document review supported by the assessment tool.

Summary of data management results

The assessment found that 55 per cent of the sector had a managed or higher approach to data management. However, the capability and capacity of services to articulate data requirements and support their workforces to sustainably produce high quality data was variable.

As outlined in Figure 13, a Managed approach was the most common for data management (27 services, 36 per cent), followed by a Repeatable approach (25 services, 34 per cent).

Figure 13. Summary of data management ratings



Source: KPMG

From the analysis, there was no clear relationship identified between the data management rating and the jurisdiction, remoteness, size of the service (by four client count categories), the CIS or the EoC to client ratio. Refer to Appendix D.2 for a detailed breakdown of the data management rating to each characteristic reviewed.

Characteristics of a mature approach to data management

The assessment found a consistent set of characteristics across the services with a mature approach to data management. These services often had a sophisticated understanding of the data required to determine community need and to measure their impact. They demonstrated high levels of commitment to collecting and using data to plan, deliver, monitor and evaluate service delivery. This had a positive flow on effect to the quality of their data to meet reporting obligations. A summary of these characteristics is set out below:

- **Leadership commitment:** The service had a sustained and visible commitment by a stable Chief Executive Officer (CEO), Executive and Board to harnessing the potential of data to understand performance and drive continuous improvement.

A service with more than 4,500 clients has strong leadership which supports a culture and practice of the effective use of data across all staff groups. Whole of service targets are cascaded to each clinic, with all staff actively engaged in monitoring data to understand their performance.

This was also a characteristic of less mature services that had made significant improvement in this area. An example of this is the collaboration between a service and an acute and secondary service. The collaboration has recently resulted in consolidation of data into a single CIS. This has created a single view of patient health information across multiple services active in the community.

- **Dedicated resources:** The service had dedicated resources with a focus on data quality and CQI.

Compared to mainstream primary health care, the reporting obligations of the sector are significantly greater. To meet these obligations and to effectively use the data collected, mature services have created dedicated capacity within their organisations. Many have also developed a more mature approach to using data to plan, deliver and monitor service delivery to the communities they serve.

Whilst the roles accountable for this function were different across services, mature services generally had a practice manager or equivalent role focused on the quality of data input, working closely with a senior clinical leader dedicated to leveraging data to support CQI processes. These roles often had responsibility for detecting and addressing data quality issues and providing regular feedback and coaching to staff to support improvement.

For example, a service located in inner regional Australia has alignment of the CIS with the model of care, where the service has configured the CIS to enable clinical teams to access the items most relevant to their work. The service has a well-resourced team that proactively manages data quality, supports service planning and quality improvement initiatives including a program of record audit, and provides ongoing support and education to staff. The team also supports regular reporting to their Board and community. This is enabled by a stable and cohesive management team.

- **Consistent, described and well understood workflows:** The service had developed and embedded workflows in every day practice, aligned to their CIS and model of care. These workflows support staff to enter data consistently and accurately into the CIS. Compliance was supported through induction, ongoing training and regular monitoring. Staff at mature services were able to identify where workflows were documented and how they were reviewed and updated as part of a CQI process.

An inner regional service has documented workflows for consistent and accurate data input in extensive role specific user manuals. These user manuals are provided to each staff member during induction and a follow up session is arranged to confirm understanding three weeks after commencement.

A service with between 1,501 – 3,000 clients has embedded induction training for staff, supported with checklists and training manuals. The training manager at the service runs fortnightly tailored training calls, addressing identified problem areas and working through an example. This structured program of training supports consistency and compliance to workflows.

- **Continuous quality improvement practices with strong feedback loops:** The service had a robust CQI process supported by data. Whilst CQI processes were unique to each service, a common feature was the use of regular clinical, executive and board meetings, along with dedicated CQI forums, to monitor data to understand performance and inform opportunities for improvement in data quality and service delivery. Importantly, these services had strong engagement from the clinical leadership in these processes. At these services regular, and documented, clinical audits were completed with the goal of identifying opportunities for clinical quality improvement as well as data quality improvement.

At a service with less than 1,501 clients, clinical governance committees regularly monitor and act on reporting, including nKPI. This ensures a high level of clinical engagement, supports a structured approach to monitoring performance and provides a formal link to the Board.

At a service located in a major city, medical students are engaged to undertake detailed clinical audits as research projects which feed directly into CQI activities. This approach also has the benefit of embedding the importance of high quality data in the future clinical workforce.

A service with between 1,501 - 3,000 clients develops and distributes weekly emails to all service staff identifying areas of improvement with data entry into the CIS. This proactive approach to CQI empowers service staff to understand opportunities for improvement.

- **Ownership across all staff groups:** A key feature of mature services was the understanding and commitment of staff, at all levels, to the importance of data in the delivery of quality care. At these services, administrative staff, health workers, nurses and medical officers all had a clear understanding of their role in accurately capturing data.

This was supported through direct involvement by all staff in CQI processes described above and the wide distribution of regular reporting of performance against nKPI and local targets. This had the effect of increasing whole of team:

- Visibility of nKPIs and/or local key performance indicators (KPIs) and their service performance.
- Awareness of management commitment to achieving national and local KPIs.
- Engagement in using data to inform structured service planning and drive quality improvement activities.
- Understanding of the correlation between their effort and performance.
- Responsiveness to feedback regarding data quality issues.

At an outer regional service, all staff are involved in scrutinising the accuracy of data through strong internal management processes. Whole of service and local data are considered and compared at regular meetings in order to understand the community and to ensure service delivery is meeting their need.

At a service with less than 1,501 clients, key staff such as the data manager, CIS manager and practice manager are involved in regular monitoring to identify areas of improvement and non-compliance. The service then involve all staff in the regular review of this data to identify further opportunities to improve the quality of the data input and service delivery.

Challenges to a mature approach to data management

During the site visits, services reported a number of common challenges to the production of sustainable high quality data. Services with a less mature approach to data quality were more likely to be smaller services with less than 1,501 clients. The complexity of consistently and accurately recording data to support reporting obligations required under the IAHP funding agreement was difficult for these services to manage.

- **Local capacity:** Smaller services were less likely to have dedicated capacity and capability within their organisation to support reporting obligations and sustain data management practices. Within these services, submitting OSR and nKPI reporting was often an 'add on' to a role, with the immediate clinical and operational responsibilities taking precedence. In the absence of this dedicated focus there was limited ability to monitor data quality and actively intervene to correct poor practice. These services were less likely to use data as part of a regular process of CQI.

At a service with more than 4,500 clients, the service has senior staff who are committed to the improvement of data quality. However, the service identified that without a resource to support this they are limited in their ability to investigate and understand the reasons for exception reports relating to their OSR and nKPI reporting.

An inner regional service shares the data management responsibilities between two staff members due to limited capacity within the service for a dedicated resource. The service acknowledged that though data quality is understood as a priority, the complex and fast paced operating environment of the service often means data quality is not the immediate priority for clinic staff.

- **Lack of training & process documentation:** Services with a less mature approach to data quality were likely to lack formalised and documented processes within their organisation to support consistency and accurate recording of data. Within these services, training for new staff was often managed through on the job training, creating inconsistent work practices.

At a service with between 3,001 - 4,500 clients, the service has some training processes in place for new staff, however, staff have identified a need to improve inductions training through documentation to ensure there is a clear and consistent understanding of clinical and data management practices and to improve familiarity with the CIS. The service also recognised the opportunity to develop formal procedures and refine training materials to inform data management practices.

- **Unstable workforce:** Services with an unstable workforce were more likely to struggle to produce high quality data. These services face a number of challenges, including:
 - New and visiting staff take time to understand local workflows to support data entry and to familiarise themselves with the CIS. Many services in remote locations face difficulty retaining staff long term, and also face difficulties in maintaining consistency in their locum workforce. In the period until proficiency is reached the quality of data input is often lower.
 - Clinicians with little experience working with Aboriginal and Torres Strait Islander patients may not be familiar with relevant available MBS items.

A very remote service relies on a high use of locum staff which, in conjunction with limited training and documented policies, creates significant data quality challenges. The locum staff rely on CIS prompts to conduct clinical activities which has resulted in large variations of data entry processes.

- Some visiting clinicians demonstrate disregard for, or low level of understanding of, the models of care used within the sector or specific services. Services reported that locum and visiting General

Practitioners (GPs) were more likely to prioritise acute presentations over complex or chronic care management (including health assessments and GP Management Plans).

The clinical leadership at an inner regional service reported that on average a permanent GP completed 50 per cent more health assessments than locum staff despite a model of care that prioritised this.

- The management and administrative burden of managing an unstable workforce, including time spent on recruitment and induction, resulting in reduced capacity within the organisation to focus on data management.
- Most services with an unstable workforce faced difficulty in managing succession planning for key roles, resulting in a significant risk to the service.

A service of less than 1,501 clients reported that data quality and management functions are concentrated into one role which, in conjunction with a lack of process documentation, creates a significant key-resource risk to the organisation.

- Some services that had implemented strategies designed to overcome these challenges found that they had little effect.

For example, at a very remote service reported that it is not possible to train locum medical officers to deliver their model of care and consistently input data in their CIS during short three month appointments.

Common recommendations

The common recommendations in data management relate to building local capacity and capability to sustainably produce high quality data and to use this data to improve practice. It is expected that through acting on these recommendations, maturity will also be raised in relation to OSR and nKPI data quality. The recommendations in Table 15 include the relevant high priority (HP) recommendations given in the Executive Summary, and additional recommendations (e.g. A1.2) which were common in the data management domain.

Table 15. Recommendations in data management

Number	Recommendations
A1	Information sharing
A1.1	Develop a platform (e.g. an online marketplace), whereby services can share better practice, policies, templates and tools with other services within the sector, and where services can express where further support is required.
A1.2 (HP)	Create opportunities to share areas of challenge and better practice across services.
A2	Workflows

Number	Recommendations
A2.1 (HP)	Develop workflows, aligned to local service delivery models, to ensure that all relevant activity is captured in the CIS.
A2.2 (HP)	Embed workflows across all staff groups through a program of induction, training, ongoing support and compliance monitoring.
A2.3	Make the mapping documents accessible through a centralised knowledge point, and promote their use to the sector, to improve understanding of the appropriate workflows for accurate data input.
A3	CQI process
A3.1 (HP)	Establish a mechanism for identifying and sharing better practice leadership approaches to evidence based practice within the sector.
A3.2 (HP)	Document and share better practice examples of CQI models and projects which have successfully improved data quality and / or performance.
A3.3 (HP)	Support implementation of the NACCHO CQI Framework, and provide tools to support local CQI efforts.
A3.4	Embed a regular structured CQI process, involving all staff, with a focus on the quality of data input and the use of data to drive continuous improvement in service delivery.
A4	Dedicated resources
A4.1 (HP)	Build capacity within services to drive data quality and CQI efforts.
A5	Induction and training
A5.1 (HP)	Develop a program of induction and training to support data quality with a focus on effective use of CIS, workflows for data input, MBS claiming and CQI.
A5.2	Provide induction, training and ongoing support to sustain a high quality of data management.

3.3.2. Clinical Information Systems (CIS)

The focus of this domain was to establish how effectively each service is using their CIS to support their model of care and reporting requirements.

The assessment also explored the quality of the data captured in the CIS and the extent to which this data is used to support the service's own CQI activities. There were three CIS in scope for Stage 1 of this assessment with a fourth, Best Practice, added into the scope for Stage 2. The CIS in scope for Stage 2 are:

- MedicalDirector;
- Communicare;
- MMEx; and
- Best Practice.

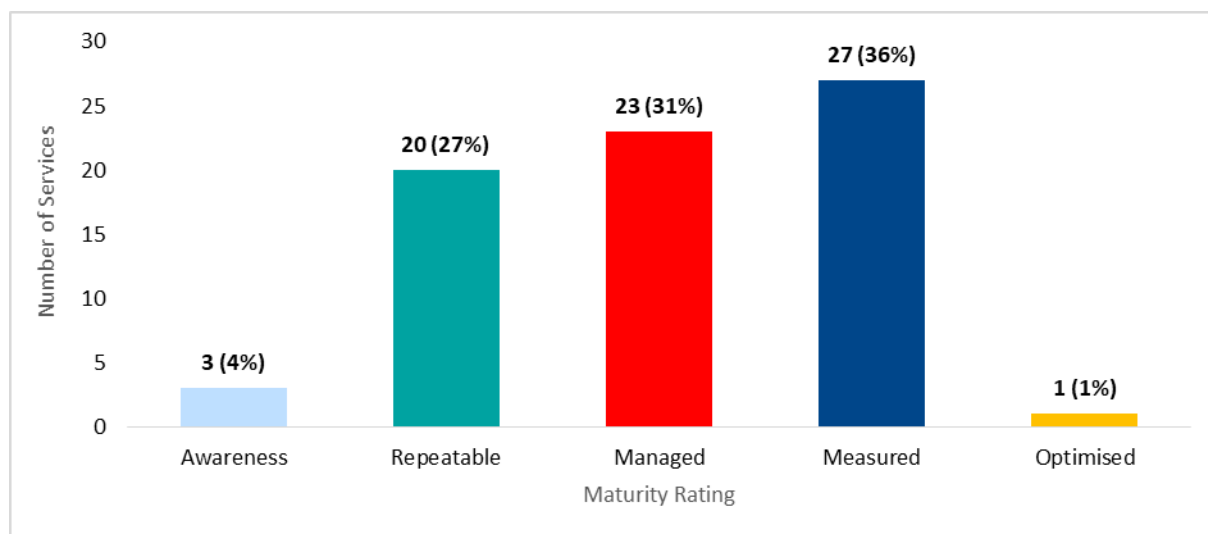
The assessment was conducted through a combined approach of collecting information from qualitative interviews, a demonstration (where appropriate) of how the service uses its CIS and a review of available documentation on policies and procedures for users who access the CIS.

Summary of CIS results

The assessment found that the extent to which services had configured their CIS was largely dependent on their choice of system. The extent to which configuration impacted on data quality was highly dependent on the maturity of the service.

Figure 14 below illustrates the distribution of ratings for the CIS area of focus. Of the 74 services participating in the assessment, 28 services had a Measured / Optimised approach to using their CIS, while 23 services had a Managed approach and 23 had an Awareness / Repeatable approach.

Figure 14. Summary of CIS ratings



Source: KPMG

From the analysis, there was no clear relationship identified between the CIS rating and the jurisdiction or remoteness. There was some relationship identified between the CIS rating and the size of the service (by four client count categories) and the EoC to client ratio. Those relationships were that services with over 1,500 clients and services that had an EoC to client ratio within the accepted range were more likely to be rated as Measured / Optimised. Services that used MedicalDirector generally had a lower CIS rating, with some services identifying challenges with data being captured in the uncoded free text fields which does not map back specific clinical codes and indicators. Refer to Appendix D.3 for a detailed breakdown of the CIS rating to each characteristic reviewed.

Differences in the CIS commonly used by services

There are four CIS commonly used within the sector. Two of these CIS' are also widely used in mainstream primary health care, and were built to meet the needs of mainstream General Practice. GPs are generally familiar with these systems and have a high level of comfort entering data into them. Some services using these CIS' have reported difficulty capturing the full range of services beyond those normally delivered in mainstream settings within their CIS.

The two other CIS' commonly used by services were built for, and with, the sector. Services using these systems often reported that they were better able to capture their full range of activity. Some services using these systems reported challenges associated with adoption and use by GPs more familiar with systems used in mainstream primary care.

The four commonly used systems have different levels of configurability. The systems which are more configurable provide the service with an opportunity to align their CIS with the model of care. However local configuration can also create challenges for the service in ensuring that data accurately maps to reporting. Less configurable systems support standardised workflows and improve useability for visiting clinicians. The challenges and benefits experienced by services from using each CIS are explained in further detail in the sections below.

Characteristics of a mature approach to CIS

Data gathered through the site visits identified a number of characteristics of more mature services use of a CIS from a data quality perspective. A summary of these characteristics is set out below:

- **A proactive, yet considered approach to implementing system updates:** The service was aware of new releases and had a clear and informed process for considering and implementing updates to the benefit of the service. This was more likely to be the case when the service had well-resourced IT support – either in-house or outsourced. Services with a sound process for considering new upgrades showed a willingness to delay implementing new versions (if there were concerns over service workflow impact or version stability), until these issues were resolved.

A service with more than 4,500 clients implements new updates as soon as they are available, working closely with their vendor to ensure the updates are installed correctly. As part of this process, changes introduced by CIS updates are communicated across the service and training is provided where required. This may include training provided by the CIS vendor or the organisation's CQI team.

The service has also produced tailored user manuals for each level of staff and uses other documentation generated by the vendor.

- **A comprehensive and transparent assessment approach of configuration opportunities:** Where a clear business need for a configuration was identified, it was discussed and reviewed by the service prior to any change occurring. Effective configurations – such as the creation of clinical templates, user group profiles

and standardised reports – were undertaken in consultation with the impacted clinical staff and with specific attention to ensuring the changes were mapped back to OSR and nKPI reporting. The decision making process and actual changes were also clearly communicated and documented to ensure transparency and traceability. This approach may also include tailored CIS manuals (rather than the generic CIS vendor manual) aligned to the service’s operating model / service delivery, which are regularly reviewed and updated.

A service with 3,001 to 4,500 clients has tailored and configured the CIS to ensure this it is aligned to their model of care, performance monitoring and reporting obligations. Configuration decisions consider clinical and reporting obligations and are documented in meeting minutes.

A very remote service has developed user profiles within its CIS that collate commonly used clinical items and templates for each of its key staff groups. These items and templates are mapped to its nKPI reporting processes. The service is currently developing CIS user manuals customised to its main staff groups.

A service with less than 1,501 clients took action to reduce the number of configurations with a goal to improve data quality. The service also limited the options for free text entry within the CIS to encourage staff to use the appropriate data fields which maps back to the relevant reporting templates.

- **Induction, training and ongoing support available to all staff:** Mature services have developed training and support programs, which include:
 - A thorough induction process delivered over the first month of work at the service. This ensures new staff understand how to appropriately record clinical activity and medical history, and how this impacts on service management as well as OSR and nKPI reporting. In some cases the induction process also included the use of a “buddy system” to provide new users a direct point of contact and support as they became familiar with its features.
 - An ongoing support program for staff, including fostering a culture of staff seeking support where they don’t understand elements of the CIS. This could be achieved through utilising their CIS vendor in delivering training to staff annually or bi-annually to extend staff understanding and address data quality issues identified throughout the year.

At a service with 1,501 to 3,000 clients, there is a structured ‘super user’ and ‘train the trainer’ approach to support continuous learning to all levels of staff. This culture and practice supports a high level of ownership and commitment across staff groups, to the effective use of data.

- **A strong vendor relationship:** The service is able to contact the vendor to seek timely assistance for all system related issues, implement configurations (where required due to business need), access information and ensure updates are installed correctly. Services identified relationships with key vendor staff, being those who understand both the CIS functionality and the sector context, as particularly important. It is important to recognise that developing such a relationship is a two-way process, dependent on the vendor being equally committed and responsive as the service. Typically, a strong bilateral relationship between a vendor and a service was evidenced by that service being a nominated

super-user or on a user committee that may provide early input into new release requirements and are the sites for early implementation of these releases.

At a service with between 1,501-3,000 clients, there is a strong relationship with the CIS vendor. This relationship enables the service to solve issues efficiently, make change requests and support staff with ongoing training directly from the vendor regarding best practice use of the CIS.

- **Contingencies in place if there is a loss of connectivity:** This is demonstrated by a clear process for entering clinical data that is consistently understood by all staff should connectivity be lost. It should be noted that loss of connectivity is not a material risk for all services but was in particular for those in rural/remote regions and for users of cloud-based systems. As a matter of good practice, all services should have appropriate processes in place to deal with this risk. Services that managed this risk well typically undertook regular backups of their data to minimise potential data loss, used power generators to address electricity failures and ceased clinical service delivery if the CIS functionality was impaired for a significant period of time. Mature services avoided the use of paper records where possible, and had clearly understood practices amongst clinical staff to ensure the CIS is updated immediately once functionality is restored, where necessary.

At a remote service there is a 'disaster box' contained in the Clinical Manager's office, offsite from the main clinic, so that data is protected in the event of a disaster. Additionally, data is backed up to the cloud weekly in the event of a power outage or if there is a loss of connectivity to the CIS.

At a service located in a major city, if there is a power outage or loss of connectivity to the CIS, there is an overnight back up system in place. In addition, they send their vendor a back-up of system data on a regular basis.

Challenges to a mature approach to CIS

Information gathered through the site visits identified a number of common challenges preventing services being able to produce and report on high quality data from their CIS. In general, services that did not display the characteristics of mature data management (listed in Section 3.3.1) were more likely to have a lower rating on the maturity scale for CIS. A number of other specific characteristics were identified across services that challenged their ability to use their CIS more effectively. A summary of these characteristics is set out below:

- **Use of multiple systems:** The assessment found a small number of services using multiple systems to capture and manage data significantly increased the risk of inaccurate reporting for nKPI and OSR. There were instances of services reporting program activity through MMEx in addition to their usual CIS, this was identified as a requirement for services receiving funding from some PHNs.

A service uses multiple systems for their different funding requirements (i.e. Commonwealth and State funding). As a result, the Social Health team use a separate CIS to that of the Primary Health Services team, meaning clients may appear in both systems. To avoid a duplication on reporting, the activity of the Social Health team is not included in the OSR report generated by the Primary Health Services team, which

potentially results in an undercount of EoC and CC. The service has recognised this is a concern and is commencing transition to use of a single CIS for all clinical services.

Information on patients from a service is held in two different CIS. This is because visiting GPs, from a mainstream service, maintain clinical records within their own CIS. Whilst, the service uses a separate CIS to manage appointments and record data for allied health and other non-GP services. The service is considering options to support a single view of their patient's information.

A service with between 1,501-3,000 clients is required to report program services through MMEx, which is different to their primary CIS. The use of multiple CIS creates difficulty for the service in OSR reporting, with an expected over reporting of clients due to clients being counted twice across the two CIS.

- **Use of a separate system / process for cross-checking data for reporting purposes:** There were instances of services double-entering data for reporting purposes, for example maintaining a separate spreadsheet that required manual entry of EoC and CC data, due to a lack of trust that their CIS was calculating this information correctly. This significantly increases the risk of incorrect reporting and presents a significant workload burden on staff.

A service with less than 1,501 clients maintains a Microsoft Excel spreadsheet to capture data for EoC and CC, which is not directly linked to their CIS. There is no ability to ensure accurate data entry into the tool (e.g. by restricting access to one user), therefore increasing the risk of human error.

An inner regional service manually complete their OSR through extracting data from a data analytics tool and cross referencing with a number of spreadsheets. The service identified this is likely to have led to inaccurate reporting of client numbers, and subsequent EoC.

- **Lack of process and assessment for configuration:** Many services have opted for significant configurations of their CIS to support their models of care. As noted in the section above on the characteristics of a mature approach to CIS, configuration itself is not an issue, provided robust processes for requirements and impact assessments are in place. There was evidence arising from the site visits that some services did not have the appropriate checks and balances in place when undertaking configurations, for example adding new clinical items without appropriate assessment of the impact on nKPI reporting, or adding new user defined roles without assessing whether the roles were mapped to data extracts. These services were less likely to have processes to assess the impact of upgrades on any configurations.
- **Configuration of the CIS:** Services reported that a lack of configuration can also be a barrier, as CIS which enable a number of different ways of recording a single clinical item may support inconsistent practices. Some services reported that they have 'tidied up' their CIS, removing unused or redundant templates (e.g. for recording health assessments) while others have created tabs that collate frequently used clinical items and templates for programs or staff groups. Others reported difficulty running local reports due to the number of variables that need to be selected.

Some Communicare users identified considerable difficulty in undertaking local reporting due to the range of variables that are used. This has decreased the confidence some services have in using the CIS. Some services have engaged the vendor to develop standardised reports to support reporting.

- **Non-compliance by staff:** Low staff understanding or compliance with service policies regarding CIS use were associated with poor data management, OSR and nKPI ratings. These issues were compounded when senior staff – key influencers within the organisation – demonstrated low commitment, leading to lower commitment amongst other staff, confusion regarding responsibilities, or increased workload for those trying to correct poor CIS practices.

For example, a service with 3,001 to 4,500 clients experience low staff turnover which has contributed to resistance amongst clinical staff to adopt new systems and processes for data management that better reflect the organisation's new service model (more reliant on case management and a centralised process of referral). The rationale for the new service model and associated change in CIS and processes is not well-understood throughout the organisation and there is some resistance from clinical staff.

- **Workforce challenges:** Two types of distinct workforce issues present challenges for services seeking to optimise use of the CIS.
 - **Locum staff and visiting clinicians:** These clinical staff are unfamiliar with CIS such as Communicare and MMEx. Both systems have advantages for the sector but are complex and take training and time to learn. This means it can take longer to induct, train and monitor new and visiting GPs. Staff on short term contracts may not become proficient in using the CIS for the period they are with the service. This issue can be compounded where services have configured their CIS to support their model of care. Additionally, services may experience a challenge of maintaining a consistent approach for data practices when staff bring customs and practices from other settings.
 - **Limited onsite CIS expertise:** In some instances expertise and understanding of the CIS system in use was limited to one person in the service. This presents a potential downstream risk of loss of key corporate knowledge and understanding of the processes for obtaining and reporting data for OSR and nKPI purposes.

For example, a very remote service reported that a high proportion of practitioners are locum staff and visiting clinicians, with experience using a variety of systems. Functionality of each CIS varies and creates inconsistent understandings of how data is captured. Due to the short appointments of locum staff, providing adequate training in how to use the CIS is difficult. Staff are often not inducted into the CIS prior to gaining access. Expertise in using the CIS is developed by locum staff over the course of the appointment and is often lost when the staff move on.

- **Lack of cooperation on changes:** A general observation was that there appeared to be little cooperative sharing of information on CIS enhancements and changes undertaken by one service with others. This has meant that on occasion, services may have requested changes to a CIS to reflect a change in a reporting requirement that is common across all services using that CIS, yet each service may fund that change for

their instance of the software themselves. This potentially results in multiple payments to a vendor to undertake the same functional change.

- **Inconsistent approach to data entry:** In a number of services there was little or no understanding of the appropriate workflow to ensure data was accurately and consistently recorded in the CIS. This was frequently accompanied by little or no awareness among staff about how CIS architecture linked clinical fields to OSR and nKPI reporting, and hence had poor understanding of how their data recording practices impacted on these reports. Staff in these services were more likely to develop their own individual practice of entering data into the CIS including through the use of free text and relying on manual systems. They were less likely to have an understanding of what data was important to capture. The impact of this challenge is outlined in more detail in the assessment of the OSR domain (Section 3.3.3) and nKPI domain (Section 3.3.4).

System-related issues impacting data quality

The site visits highlighted that whilst there are a number of actions that services can undertake to improve their use of CIS to drive data quality improvements, challenges also remain at the vendor end. The vendor-related challenges identified through the assessment are outlined below:

- **Lack of clarity on relationships between data fields and OSR/nKPI reporting:** A common theme arising from many site visits was lack of vendor information on which data fields within a CIS were being utilised to populate OSR, and in particular nKPI reporting. This lack of information has meant inconsistent use of certain data fields, which has an impact on overall reporting. Vendors have worked with the Department to develop specific mapping documents, services were not always aware of the existence of these documents which will help to significantly alleviate this problem.
- **Inconsistencies between vendor definitions of data elements:** A number of services raised inconsistencies in how vendors have interpreted and defined certain indicators as a contributory factor to changes in their OSR and nKPI results over a period of time.

This issue has been previously identified by the Department. A separate body of work has been undertaken to analyse the extent of inconsistencies caused by varying interpretations across vendors, with a view to reducing these over time. The Department has also commissioned a review of the nKPI and OSR collections, one dimension of which is to consider how to achieve greater consistency of implementation between vendors through more precise specification of indicators.

- **Inadequate training support and resources:** Site visits found poor understanding among some users about how the clinical items mapped to clinical codes and then qualifier codes, as well as limited understanding on how to consistently run reports. This was leading to ongoing issues with reported data being inconsistent. Vendor-specific mapping documents commissioned by the Department will help to build user understanding of their CIS.

Common recommendations

The common recommendations in the CIS domain are outlined below. Note that some of the recommendations outlined in the data management domain in Section 3.3.1 (in particular, items A2.1, A2.2, A2.3 and A5.2) apply here. Only additional recommendations not already outlined in Section 3.3.1 have been listed in the table below.

Table 16. Recommendations in CIS

Number	Recommendations
B1	Information sharing
B1.1 (HP)	Support a regular program of training on the effective use of CIS' to support consistent and accurate data input and reporting for all service activity.
B1.2 (HP)	Ensure that CIS commonly used in the sector are able to capture the range of activity delivered by services to support their model of care and enable accurate reporting.
B1.3 (HP)	Establish a forum that allows services to work together to inform development and enhancements of CIS at a sector level.
B1.4	Facilitate vendor-specific user forums to share areas of challenge and better practice across services, including enhancements undertaken to the system and collaboration on seeking changes that are a common requirement across vendor sites.
B1.5	Develop more targeted user manuals and training materials (e.g. webinars) that specifically address the reporting processes for the sector and to raise awareness of configuration impact.
B2	Configuration process
B2.1	<p>Support the development of best practice guidance on CIS configuration. This should include:</p> <p>Clear criteria for determining if a configuration is required (e.g. due to unique requirements arising from the model of care in the practice).</p> <p>A process for development and assessment of the configuration, which would include an impact assessment on reporting.</p> <p>An implementation and change management / training process for staff so that the configuration is used consistently and accurately.</p> <p>Guidance should also outline processes for regularly reviewing (and potentially removing) redundant configurations e.g. templates, clinical codes etc.</p>

Number	Recommendations
B3	Training
B3.1	<p>Embed CIS training as a mandatory component of the induction process and restrict access to the system until this has been completed.</p> <p>Establish a regular program of training, supported by annual assessment, to ensure staff maintain appropriate familiarity and are across any new functions implemented since their last assessment.</p>
B4	CIS version upgrades
B4.1	Upgrade the CIS reporting tool before each reporting period, and as soon as practicably possible upgrade the CIS to the latest version available that is compatible with accurate reporting.

3.3.3. Episodes of Care and Client Contacts

The focus of the EoC²⁸ and CC domain was on exploring service processes for capturing and reporting on their EoC and CC data, to assess whether the processes were reasonable and whether there was a justifiable basis for the reported counts.

This assessment was conducted using:

- A quantitative process involving analysis of the service's 2014-15 to 2017-18 (up to 2016-17 for Stage 1 services) reported client and EoC count as well as their EoC to client ratio in the context of their relevant geographical average. The 2016-17 (Stage 1) and 2017-18 (Stage 2) ratio was also considered against the accepted ratio range of 5 - 15 EoC per client per year²⁹.
- A qualitative approach involving interviews supported by the assessment tool.

Summary of OSR results

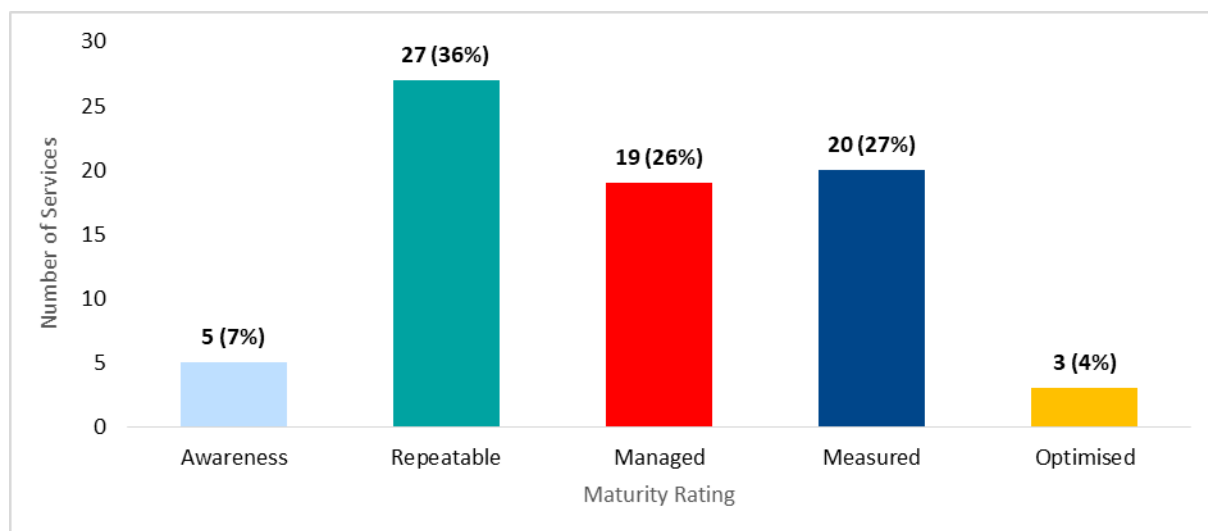
The assessment found that there was some variation in the processes used by services to capture data used in the EoC and CC counts.

Of the 74 services that participated in the assessment, most services had a Repeatable approach to OSR (27 services, 36 per cent), followed by a Measured approach (20 services, 27 per cent). The distribution of maturity ratings for OSR is illustrated in Figure 15 below.

²⁸ An EoC is a contact between an individual client and service, with one or more staff, to provide health care within one calendar day. All contacts on the one day are treated holistically as one EoC (OCHRE Streams. [On-line Services Report \(OSR\) Data Collection Instrument 2015-16 Final Version](#). Accessed on 18 June 2018).

²⁹ As defined by the Department of Health.

Figure 15. Summary of OSR ratings

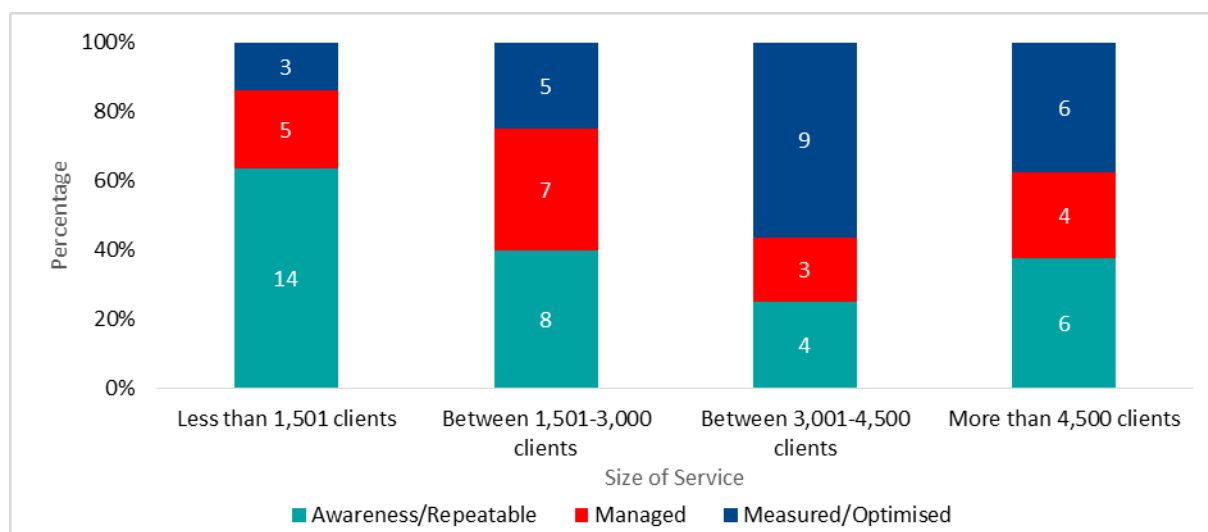


Source: KPMG

From the analysis, there was no clear relationship identified between the OSR rating and the jurisdiction, remoteness or the CIS. There was no apparent relationship between the EoC to client ratio and the rating provided. Refer to Appendix D.4 for a detailed breakdown of the OSR rating to each characteristic reviewed.

The summary analysis identified that there may be a relationship between the size of the service (by four client count categories) and the rating provided. As illustrated in Figure 16, services with client numbers between 3,001 and 4,500 clients and those with more than 4,500 clients had the highest proportion of services receive a Measured / Optimised OSR rating. Only three services with less than 1,501 clients received a Measured / Optimised OSR rating.

Figure 16. OSR maturity ratings by size of service



Source: KPMG

Most services reported that OSR data was of little value in their efforts to monitor and continuously improve their service. The reason most commonly provided for this view was that OSR data is a count of activity, rather

than a measure of outputs or outcomes. Services nominated this type of data, including nKPI data, as more relevant to understanding their performance in improving health outcomes for their community.

EoC to client ratio

EoC to client ratios were variable across services, both in terms of the variability of the ratio over time and the range of ratios reported. A number of services raised concerns that specific characteristics of their service, or factors outside of their control, that drive their EoC to client ratio may have a negative impact on their funding in the proposed funding model.

Consistent explanations were provided by services for the following situations:

- Decrease in the EoC to client ratio over the period reviewed.
- Services that experience a variable EoC to client ratio.
- Services that have a lower EoC to client ratio.
- Services that have a higher EoC to client ratio.

These are reviewed in further detail below.

Decrease in the EoC to client ratio over the period reviewed

During the site visit, service EoC to client ratio for 2014-15 to 2016-17 (Stage 1) and 2017-18 (Stage 2) was explored. In Stage 1, 38 of 53 services (72 per cent) experienced a decrease in their EoC to client ratio in 2016-17. In Stage 2, 5 of 21 services (24 per cent) experienced a decrease in their EoC to client ratio in 2017-18, while three services did not have 2016-17 or 2017-18 data to enable comparison. Consistent explanations provided to explain this decrease were:

- Within this period, a correction to the OSR EoC definition within Communicare (for 2016-17 data) had an immediate and significant downward impact on this ratio. The correction was undertaken to make the business rule for calculating EoC consistent with the EoC definition, and to align this with other CIS (e.g. MMEx, Best Practice and MedicalDirector).
- A number of services reported that their EoC to client ratio dropped due to improved data recording practices, such as work to identify and archive the medical records of clients who were deceased or had left the community.
- A number of services reported their EoC to client ratio dropped due to an increase in client numbers that was not matched by an increase in EoC. Service suspected this was due to challenges such as resourcing constraints, expansion of geographic footprint and physical infrastructure constraints.

A service with more than 4,500 clients believes their EoC to client ratio decreased over the period due to a significant increase in client numbers which was not matched by an increase in EoC. The service identified this was due to resourcing constraints and the expansion of the service's geographic footprint over the period.

- Services adopting a new model of care which aimed to provide all relevant services on a single day instead of across a week or month. This model is driven by a desire to deliver person centred care and to reduce workload required for managing recalls; however, the majority of services also raised concerns that these improvements would be perceived negatively and may have a negative impact on funding if considered through the lens of the current EoC definition.

An inner regional service believes that their EoC to client ratio decreased in 2016-17 due to their adoption of a more streamlined model of care for their patients. The service explained that they promote and prioritise patient access to multiple clinicians within a single calendar day.

Services that experience a variable ratio

A number of services explained that their EoC to client ratio is quite variable, due to the following characteristics of their service:

- Some services with a high proportion of transient clients reported that they may have large variations in any year in client numbers, CC and EoC counts. This had an impact on the service's ability to deliver planned services such as health assessments and chronic disease management plans. For these reasons, services believe the high numbers of transient clients skew the EoC to client ratio downwards.

A service had an EoC to client ratio which sits below the accepted ratio range of 5-15 EoC per client per year. The service explained that they have a high transient patient population, where a large number of visiting clients will attend the service for a defined period of time while visiting the area, or travel to a different location to access a specific program. They believe this is one reason their EoC to client ratio is below the accepted ratio range.

- Workforce gaps, such as where a GP, nurse or Aboriginal Health Worker is unable to be recruited impacting on the volume of services able to be provided for a period of time.
- Periods of governance or management instability, leading to a decrease in service utilisation as community confidence in the service declined until the issues were resolved. A small number of services reported this issue.

Services that have a lower EoC to client ratio

In addition to the reasoning provided above in regard to services experiencing a decrease in their EoC to client ratio, the following explanation was provided by services who generally report a low EoC to client ratio:

- Data quality issues, including failure to record eligible activity or generation of false contacts due to faults when accessing medical records. These issues are further discussed in the section below describing the challenges to a mature approach to OSR.
- Limitations in the ability to capture community programs within the CIS, leading to significant portion of activity performed being missed from the EoC to client ratio.

Services that have a higher EoC to client ratio

Services with a higher EoC to client ratio explained that their clients had high rates of complex, chronic health conditions which required regular intervention. A further reason provided was that, due to geographic isolation, there was no alternative provider available to their clients resulting in all clients receiving all care from the service.

A service believes that their ratio is on the higher end of the accepted ratio range as they have a highly dependent population and there is a high level of trust within the community with their long-term clinic staff.

A service explained that their high EoC to client ratio was driven by clients, who often had high rates of chronic disease, SEWB concerns and complex health needs, attending the service multiple times per week. Clients view the service as part of the community and have a tendency to use it for social reasons.

Characteristics of a mature approach to OSR

The assessment identified a consistent set of characteristics across services with a mature approach to OSR. These services demonstrated established, well understood workflows across the service and had processes in place to support the accurate reporting of data. A summary of these characteristics are set out below:

- **Strong understanding of definitions supported by well-established workflows:** The service had a clear understanding of the definitions for client numbers, EoC and CC and has developed workflows to ensure that all relevant activity is accurately captured within their CIS. This includes a clear understanding among staff of the importance of capturing all clinical activity:
 - Within the approved CIS, using the required fields to ensure that the OSR report is an accurate reflection of all of the services provided.
 - In real time (i.e. during a consultation) to ensure activity was not omitted.

For some services, this has required configuration of their CIS to ensure that non-medical services such as transport and SEWB can be accurately recorded. The importance of understanding the appropriate workflows in the CIS is explored in greater detail in Section 3.3.2.

A service with more than 4,500 clients has established a small team of Administrator staff. This team provides ongoing monitoring of data quality, including weekly record checks that help ensure data entry errors are rapidly identified and addressed. A team within the service act as 'super-users', assisting staff with training and CIS queries as well as development of relevant tools. The service has established a clear process for extracting, reviewing and reporting OSR data. The service has a high level of confidence in the accuracy of their OSR data.

An outer regional service has established an active monitoring of data process to ensure data quality is upheld. The service actively monitors their client numbers and, based on findings, implements active interventions to improve the quality of EoC data, ensuring that all client contacts are being captured in the CIS.

- **Clearly defined roles, responsibilities and processes to support accurate OSR reporting:** The service had a role responsible for the data provided in the OSR. There is a clear line of approval for the review, validation and submission of OSR data, from the point of report generation to final review and submission. The service had processes in place to identify data anomalies during the reporting process – and hence prior to submission – enabling these to be either resolved or proactively explained to the Department within the report. Where exception reports were received, the service also had processes in place to investigate these, and where necessary, provide an explanation or clarification to the Australian Institute of Health and Welfare (AIHW), and to implement systemic or process changes where necessary to prevent future reporting errors.

An inner regional service has defined and mature processes to support accurate reporting of OSR, as described above, and they have processes in place to investigate exception reports, where required.

Challenges to a mature approach to OSR

A number of challenges were identified during consultations which impact on the ability for services to accurately and consistently capture and report on OSR data. A summary of these challenges are provided below:

- **Poor data entry and recording practices:** Services with a low maturity rating for OSR identified the following issues:
 - Under-reporting of client numbers and EoC due to a failure to record eligible clinical activities in the approved CIS, including where staff have used an alternate CIS or manual lists (e.g. Excel). In some circumstances, this was because the service did not understand that this was eligible activity. This in turn led to relevant data being omitted during OSR reporting.

A service located in a major city raised concerns about the accuracy of their EoC to client ratio, believing low understanding by frontline staff about appropriate workflow to be a key factor in this result. Clinicians enter activity inconsistently into the CIS, including use of free text fields instead of appropriate clinical items and adopting different methods of recording activity in progress notes, impacting on the reported activity.

 - Over-reporting of client numbers and EoC due to recording of activities which are not eligible, such as telephone contacts for administration purposes (e.g. book or confirming appointments). This indicates the importance of ensuring staff at all levels have a clear understanding of the definitions of client numbers, CC and EoC. Notably, the assessment teams found that frontline clinical staff frequently expressed a desire to better understand how clinical activities within their CIS mapped to reporting tools.
 - Over-reporting of client numbers and EoC due to generation of false client contacts, an issue for Communicare users in particular. This occurs when staff access a client's medical record under 'Clinician' instead of 'Administrator' status and accidentally record a client contact. As a result, a client's record may be reactivated and the client counted as 'eligible' when they have not received

services within the collection period. Creating role-based profiles for all staff (and ensuring they have unique login details) is an important safeguard to mitigate against inaccurate recording of this nature.

At a service, there were some occasions when staff access a client's clinical record using 'clinician' instead of 'administrator' status, which can unintentionally and incorrectly generate a CC. As a result, this can cause a client to be recorded as 'current' and/or 'eligible' when they have not received services during the collection period.

- **CIS constraints impacting on the ability of services to record eligible data within the approved system:** Several services report that their CIS does not enable some non-medical services such as patient transport and SEWB to be appropriately recorded. A number have configured their CIS to enable this activity to be recorded; however, this requires either the support of their vendor (with potential additional costs) or involvement of a staff member who is able to complete configurations and ensure the activity is appropriately mapped to the OSR reporting systems.

An inner regional service believes that there may be under-reporting of SEWB OSR data, as brief interventions provided through outreach and other community activities may not be captured fully. The assessment process identified the need to educate staff about eligibility definitions and establish new workflows that supported recording of this activity in the approved CIS.

- **High turnover of clinical staff and locum clinicians:** A high turnover rate of clinical staff and locum clinicians presents the additional challenge of continually requiring to train new staff to obtain the appropriate knowledge of workflows and definitions for EoC and CC.

A very remote service experienced high staff turnover within the period 2015-16 and 2016-17, and had a large number of new and inexperienced staff orienting themselves on the operation of the service. The service believes this was a reason for their reduced EoC to client ratio for the 2016-17 period.

- **Services have recently transitioned, or are transitioning to a new CIS:** Where services are transitioning their CIS to a different vendor, they have experienced challenges ensuring that their data is transferred across accurately.

Some services raised concerns about the accuracy of their OSR report due to the possibility that data was either incorrectly transferred or omitted when transitioning from one CIS to another. A service believes that there is a recognised level of under-reporting of EoC and CC caused by poor cleansing of client data and data lost during migration of CIS. Similarly, another service reported that during the data transition, significant issues were encountered with diagnoses for clients; for example, many were recorded as having a chronic condition from birth instead of a diagnosis date later in life. These data problems required considerable staff resources to address and some data was unable to be transferred to client records under the new CIS.

Common recommendations

Many of the recommendations in relation to data management and CIS at Section 3.3.1 and 3.3.2 respectively apply here and, if achieved, would also have a positive impact on OSR reporting maturity.

Table 17. Recommendations for OSR

Number	Recommendations
C1	Definitions
C1.1	Ensure that staff understand the definition of important terms that relate to OSR (e.g. EoC, CC and clients) and link this to the importance of data quality and reporting clinical activity.
C2	Workflows
C2.1	Ensure workflows to support real time capture of all CC and EoC activity, with a particular focus on transport, SEWB and certain allied health activity.
C3	Training
C3.1	Document the service's OSR reporting approach to ensure roles, responsibilities and processes are clearly defined. This should include a description of approaches to data extraction, review, approval, submission and addressing exception reports.
C3.2	Ensure that OSR reporting can be completed as far as possible by direct load from the CIS, and that all relevant data is systematically recorded in the CIS. This will reduce the need for manual data recording and reporting based on data being entered into separate databases.

3.3.4. National Key Performance Indicators (nKPIs)

This area of focus involved exploring the data quality of seven data items related to five in scope nKPIs. This included considering if and how services used nKPI data to understand their own performance and support local CQI activities.

The five nKPIs in scope for the assessment were:

1. PI 03: Proportion of Indigenous regular clients for whom an MBS health assessment for Aboriginal and Torres Strait Islander People (MBS item 715) was claimed (9-12 months).
2. PI 05: Proportion of Indigenous regular clients with type 2 diabetes who have had an HbA1c measurement result recorded (12 months).
3. PI 14: Proportion of Indigenous regular clients aged 50 and over who are immunised against influenza (12 months).

4. PI 18: Proportion of Indigenous regular clients with a selected chronic disease who have had a kidney function test (12 months).
5. PI 23: Proportion of Indigenous regular clients with type 2 diabetes who have had a blood pressure measurement result recorded (6 months).

The nKPI domain was explored through three methods:

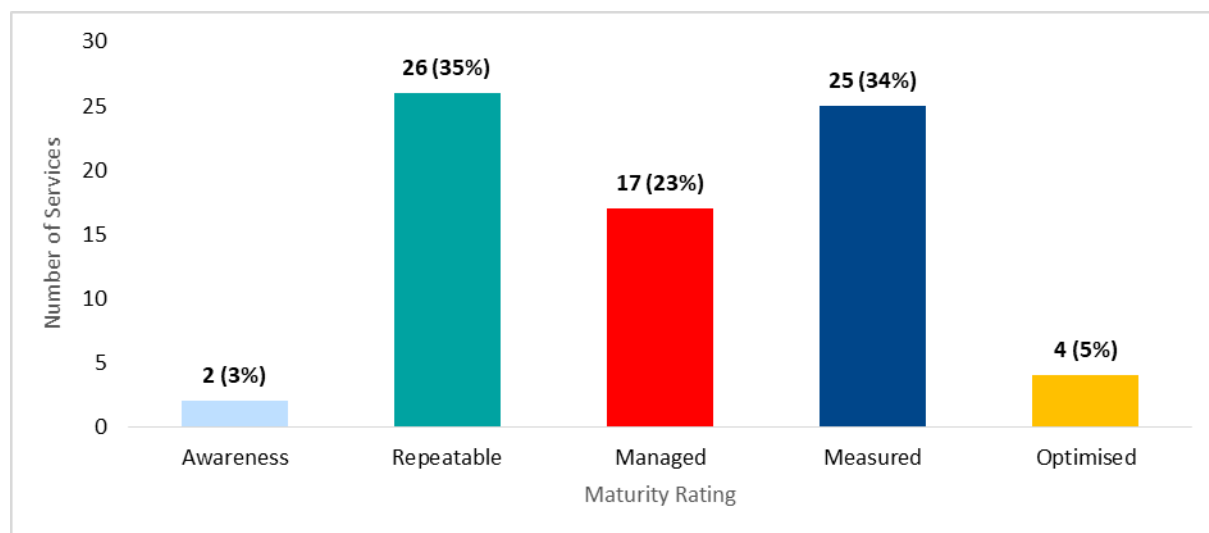
- A quantitative process involving analysis of service 2016-17 (Stage 1) and 2017-18 (Stage 2) nKPI data in the context of the 2017 and 2018 Implementation Plan Trajectories (national trajectories), respectively.
- A qualitative process involving interviews supported by the assessment tool.
- A demonstration of how the service records information into their CIS for in scope items.

Summary of nKPI results

The assessment found that the quality of the values reported for the seven in scope data items was highly variable and was impacted by a range of data and other contextual factors.

Ratings relating to the nKPI domain for 74 services are presented in Figure 17, 39 per cent of services rates as having a mature approach to nKPI.

Figure 17. Summary of nKPI ratings



Source: KPMG

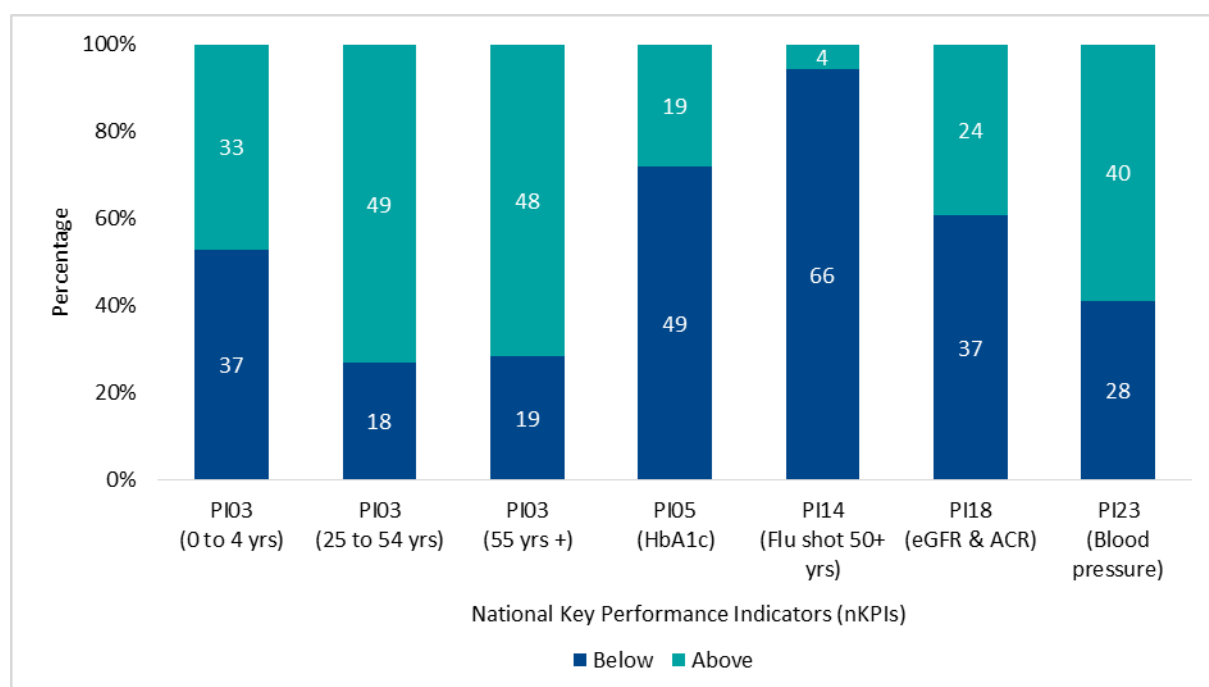
Analysis of the ratings showed that there was no clear relationship between jurisdiction, remoteness, size, CIS and the EoC to client ratio.

Performance against the national trajectories is outlined in Figure 18. This presents analysis of available nKPI data points for 2016-17 (Stage 1) or 2017-18 (Stage 2), noting that no nKPI data was available for three services, and a further 13 services did not report on all seven data items related to the five nKPIs. Of the visited services, the majority were above the 2016-17 (Stage 1) and 2017-18 (Stage 2) Implementation Plan targets for PI 03 (25 to 54 yrs), PI03 (55 yrs +) and PI 23 (blood pressure tests).

However, more than 50 per cent of services were below the target for:

- PI 03 (0 to 4 yrs).
- PI 05 (HbA1C tests).
- PI 14 (Influenza vaccination for persons aged 50 years and older), only two services were above the 2016-17 target.
- PI 18 (eGFR and ACR tests).

Figure 18. Count of services visited and whether they were above or below 2016-17 (Stage 1) or 2017-18 (Stage 2) implementation plan targets by nKPIs



Source: KPMG

Definition of regular client

A number of services raised concern about the impact of the definition of regular client on their nKPI performance. These services generally fell into two categories:

- **Services with a highly transient population:** A transient population may have their health care needs met by multiple services. Services identified that they may see a patient on three occasions for an acute illness within a short period and then not again for many years. This makes it challenging for any one service to be accountable for long term care management (including health assessments) of a patient.
- **Services in areas with multiple other mainstream service providers:** These services raised two issues. Firstly, patients may choose to receive some care from a community controlled health organisation and other care from mainstream health services. Secondly, these services raised a concern that mainstream service providers undertake health assessments, because of the level of available reimbursement under the MBS, without taking accountability for ongoing care management. This also created an additional

administrative burden for services to check whether health assessments and/or other activities have been provided to their clients by another service.

A service reported that the definition of regular client (three visits in two years) excludes approximately one quarter of its resident population while including an equal number of transient clients.

Characteristics of a mature approach to nKPI data quality

Services with a mature approach to nKPI data quality were likely to have a well-developed model of care supported by pathways for the delivery of related services and workflows for accurate data input.

A summary of the characteristics of services with a mature approach to nKPI data quality is set out below:

- **Model of care:** Service delivery was informed by a model of care focused on improving the health and wellbeing of the patient and community. Delivering services related to the in scope nKPIs was embedded in this model, with health assessments recognised as important tools to gather baseline patient information, identify health needs and establish a planned cycle of care. The service set targets, cascaded to clinic level, to support data quality, achievement of national trajectories and to optimise MBS billing.

A service with 3,001 to 4,500 clients strongly aligns its service planning and quality improvement activities to the nKPIs. This work is supported by the leadership team, which regularly provides nKPI reports to clinical staff enabling management to quickly adjust clinical operations where necessary. nKPI performance is also reported to the Board and community via the Annual General Meeting (AGM).

- **Established workflows:** The service had developed workflows to support the accurate capture of numerator and denominator data. Staff understood the importance of capturing this data and their specific responsibility for data input. In particular, staff understood the importance of entering data into the correct CIS fields and consistently using clinical items and clinical templates. For the most mature services, staff also understood how data entered into the CIS mapped across to nKPI reports and hence had increased insights into the importance of following the service's established procedures. Furthermore, documentation of these workflows – such as using customised CIS user manuals, cheat sheets and organisational policies – helped maintain data quality sustainability and clarify to staff the consequences of non-compliance with them.

A service has developed customised Communicare manuals for its staff groups which document data entry practices for key clinical items. These are used for staff training and are also available at any point as reference guides.

- **Continuous quality improvement:** The service had a CQI process which focused on both the quality of nKPI data and its use to understand performance. There was a process, involving relevant clinical and executive team members, for reviewing nKPI data and for investigating and resolving exception reports. nKPI data was regularly considered by the staff members, the Executive and Board and used to inform operational management, service planning CQI activities and training. In addition, the service had established a comprehensive data quality framework that includes regular audits of medical records to ensure that staff are entering data using approved fields, clinical items and clinical templates.

A service with 3,001 to 4,500 clients has implemented a comprehensive CQI framework that supports their work to address the nKPIs. The service's management, including clinical leads, monitor performance against the nKPIs on a monthly basis, and these results are shared with staff and the Board.

A remote service operates on a regional model, managing a number of clinics and also providing corporate and clinical support services to other services across the region. The service monitors the performance of its services and also those of its members against locally determined KPIs, using nKPI data to inform this work where available. This service is informing the planning and delivery of clinical services across the region, and also helping to highlight data quality issues as staff are better able to detect and report circumstances where the performance data does not align with their experience at clinic level.

Challenges to a mature approach to nKPI data quality

The maturity of nKPI data quality was impacted by a range of common factors across services.

- **Inconsistent approaches to data input:** The service did not have a good understanding of the numerator and denominator data required to support reporting or how to record this accurately in their CIS. As a result, a workflow to input data is often not in place or well understood across staff groups leading to inconsistent use of clinical items, recording activity in free text fields and diagnosis non-recording. This has a direct impact on the quality of the data with the potential of undercounting of activity across all indicators and missed opportunity for claiming of eligible activity.

When MMEx users enter clinical observations directly into the progress notes using particular code triggers such as a colon (e.g. BP: 120/80), the CIS will identify this and pre-populate related fields in other parts of the patient's record (e.g. Observations, health assessment templates). However, where staff have low awareness of these triggers they may omit them and consequently the information is not transferred and not picked up during nKPI reporting.

Communicare makes use of clinical items and several types of codes (system codes, export codes and qualifier codes) for reporting purposes. It is important that Communicare users understand how these codes map to both nKPI and local reports to ensure that staff enter data into the CIS appropriate.

Communicare users also reported that the CIS may identify a particular clinical item through a variety of inputs; for example, activity such as blood tests relating to iron deficiency may be identified by searching for 'iron', 'iron deficiency', 'deficiency iron', 'anaemia' or 'blood test'. It is important the clinical staff understand which clinical items are mapped to qualifier codes to ensure all relevant activity is captured during reporting.

- **Configuration of the CIS:** Configuration to support the service model of care had occurred without regard to the impact on reporting. Services with low maturity using highly customisable CIS demonstrated little understanding of the effect of local changes, including additional clinical items, assessment templates and short cuts, on the quality of nKPI reporting and the useability of their CIS. High levels of local configuration made standardised vendor-supplied manuals, induction, training and workflows less relevant to the service.

A service with less than 1,501 clients identified a number of configurations had been made to their CIS, however these configurations were implemented by a SSO and this had not been documented. The service noted there is heavy reliance on the SSO to ensure these map to the nKPI reports correctly.

- **Unstable workforce:** A number of services have developed workflows for accurate reporting but struggle to gain adherence by visiting clinicians and locum GPs. This problem is exacerbated when new and non-permanent staff do not have a background in the sector and are unfamiliar with reporting obligations. For these services, there can often be a significant difference in the quality of data entered by permanent and non-permanent staff.

A remote service identified high workforce turnover and a corresponding reliance on locum staff as a major challenge for the organisation. The high cost of living in the area as well as governance and management instability have been barriers to retaining the workforce including achieving a consistent pool of locum staff. Many locum staff work with the service for a short period of time and often receive little or no training in using its CIS and understanding local workflows. In the absence of a data quality audit program, the service is unable to detect errors or omissions made in relation to recording clinical activity.

- **Assuring data quality:** Whilst all services except one had clear lines of approval for the submission of nKPI data, less mature services did not have a robust process in place for the regular review of data, for example through monthly audits of a sample of medical records. Clinical team members and those with this directly relevant knowledge of related service delivery were not routinely involved in checking for errors. These services were often unable to understand or explain reasons for errors in their data. They were also less likely to report on or monitor nKPI data on a regular basis as part of CQI activities.

Several issues impacting on the quality of nKPI reporting data were identified for a service with more than 4,500 clients, including incorrect data entry practices, unclear processes for extraction and reporting, an absence of data auditing practices and no clinical involvement in reviewing reports prior to submission. A large proportion of clinicians enter data into the 'progress notes' field instead of using the clinical items and templates that are mapped to nKPI reports. In addition, some pathology test results are not auto-populated into the CIS and others are scanned and attached instead of being entered manually.

Compounding this, staff receive limited training before commencing work and using the CIS, and the service lacks performance reporting that would highlight these issues to staff.

In addition to the above challenges, a small number of services raised concerns that nKPI reporting, which they believe they had submitted for particular periods or clinics was unavailable to this project, as the Department did not have a record of it.

nKPI specific observations

The assessment made specific observations related to data quality for in scope items. These are considered below.

- **Health assessments (PI 03)**

The majority of services considered health assessments to be integral to their model of care. This was supported by a system of recall (between 9 and 12 months since the last assessment) and patient pathways. This pathway generally involved either an Aboriginal Health Worker, Aboriginal and Torres Strait Islander Health Practitioner or nurse collecting patient information and taking observations, including heart rate and blood pressure and measuring HbA1c. The GP would then see that patient to complete the assessment. For this reason, most services considered their health assessment data to be generally accurate.

A small number of services identified that health assessments were not a priority in meeting the needs of their community.

A very remote service with a client driven, nurse led model of care identified that completing health assessments was not a priority for their patients. The service indicated that while all of the clinical activities associated with a health assessment would likely be provided to clients at various points throughout a calendar year, they were not performed as part of a billable health assessment episode.

A number of services reported challenges completing health assessments. These services outlined a scenario whereby an appropriate team member would collect patient information and take observations to the point that the assessment was substantially complete but could not be completed for the reasons outlined below:

- Workflow did not support completion. A GP appointment was not available to support completion of the health assessment during the same visit. In this situation, the opportunity might be 'lost' because of a patient's unwillingness to attend a further appointment.
- The GP workforce did not support completion. This is particularly an issue for services with a locum GP workforce and is explored in more detail at Section 3.3.1 Data management.
- A lack of access to a GP workforce. This particularly impacts services in rural and remote areas where there is no or infrequent access to a GP. One potential solution put forward to this challenge was that a suitably qualified nurse practitioner should be allowed to complete a health assessment and bill the MBS for the service.

Whilst there is not necessarily a direct impact on data quality related to health assessments, there is a cost to the service for delivering this activity and missed opportunity to optimise MBS revenue.

Similarly, the assessment found that there was a high degree of variability across services in relation to the processes in place to support health assessment follow up (10987, up to 10 services per calendar year) and referred allied health services (81300, 81305, 81310, 81315, 81320, 81325, 81340, 81345, 81350, 81355 and 81360, up to 5 services per calendar year). For lower maturity services this included GPs failing to identify follow up and referred allied health services as part of the health assessment, a lack of robust processes to support recall for follow up services or billing for nurse or Aboriginal and Torres Strait Islander Health Practitioner follow up services provided on behalf of the GP or for referred allied health services.

Whilst this has no direct impact on data quality in relation to health assessments, it represents an opportunity to improve service delivery and MBS claiming of eligible activity.

- **HbA1c (PI 05)**

The majority of services described a model of care which supported regular measurement of HbA1c for diabetic patients. A typical patient pathway involved the Aboriginal Health Worker, practitioner or nurse taking this measurement as part of the routine general observations for all appointments, prior to the patient seeing the GP.

Three particular data quality challenges were identified in relation to this item:

- The workflow to record HbA1c was not well understood. Staff involved in taking this measurement would inconsistently record results including through the use of free text.
- Point of Care (PoC) testing requires manual entry. A significant number of services used both PoC and external providers. The data quality related to PoC testing was considered to be lower because of the requirement for staff to manually enter the data into the CIS.
- Inconsistent recording of diagnoses. A significant number of services reported inconsistent practice by GPs in relation to recording a diagnoses of type 2 diabetes. This might involve inconsistent use of clinical items, recording in incorrect fields or by free text or non-recording. A number of services identified unclear responsibilities for recording a diagnosis in the CIS when this has been made by an external health service (e.g. specialist or hospital) and this information is provided in a letter or discharge summary. As a result, 36 per cent of the services considered that all patients with diabetes were not accurately captured in their CIS.

The first two challenges impact the data quality of the numerator for this item, while the final challenge impacts the denominator. It is also worth noting that 31 per cent of services (22 out of 71 services that responded to this question) considered that not all services delivered to patients with diabetes were captured within the CIS.

A service stated that while HbA1c results provided by the state's major pathology provider auto populate into its CIS (MMEx), PoC testing results undertaken in its clinics are not mapped to MMEx's nKPI reporting. Similarly, the service understood that other PoC testing is not mapped to MMEx.

- **Blood pressure (PI 23)**

The majority of services described a model of care which supported regular measurement of blood pressure for all patients. As part of the patient pathway, described above, blood pressure is typically measured for all patients regardless of the reason for the appointment. As a result, services considered that the data in relation to the numerator for this item was generally accurate. However, the same data quality issues outlined in relation to PI 05 impact on the denominator.

- **Flu shot 50+ years (PI 14)**

The gap between performance and the national trajectory was greatest for this indicator across almost all services. Of the 70 services that had reported this indicator only four were above the 2017 (Stage 1) or 2018 (Stage 2) Implementation Plan target of 60 per cent and 61 per cent of adults aged 50 years and over being immunised against the flu³⁰.

A small number of services identified data quality issues related to this. The most commonly cited reason was that there was a delay by CIS vendors in mapping new vaccination names to reporting.

However, services were more likely to identify patient preference or service delivery challenges as the reason for this performance, including:

- A delay in the provision of the vaccination until well into the flu season had an impact on the 2016-17 data.
- Multiple services ran campaigns targeting clients with little or no clear agreement on how to meet need or to accurately capture data across providers. Services identified that this led to inefficient use of resources and poorer quality and incomplete data.
- A very high refusal rate by clients. Many services now capture this data (e.g. 'offered and declined' and even 'offered and declined for life') and consider that it should be reported upon nationally in order to better understand underlying reasons and inform public health promotion. Many services have configured their CIS to enable these client responses to be recorded.

- **eGFR and ACR (PI 18)**

A significant number of services reported data quality concerns in relation to this item and as a result considered their data to be inaccurate. The key concern in the numerator was that results from certain pathology providers were not directly populating in the correct fields within the CIS. This required a staff member to manually enter this information. Whilst some services were actively seeking to resolve this issue many others felt powerless to do so as they were unable to secure cooperation across multiple pathology providers and their CIS vendor.

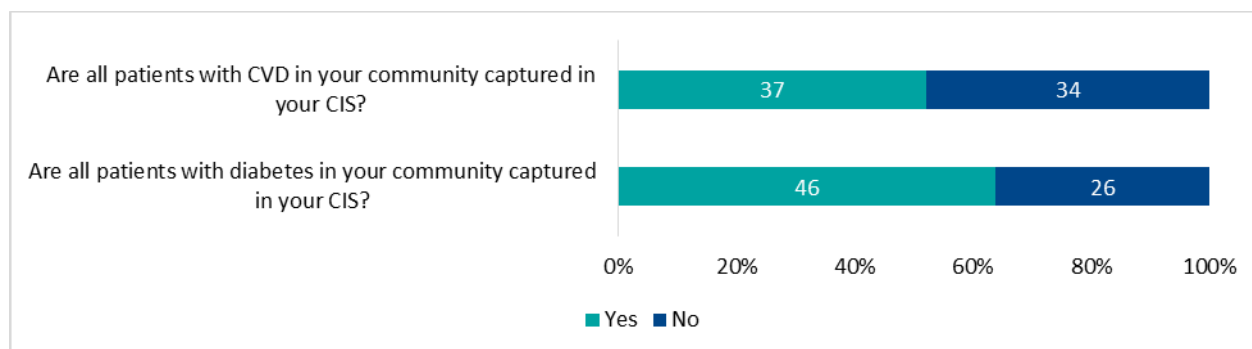
For a number of services a further concern in relation to numerator data quality was that PoC testing required manual entry. This is consistent with the challenge described in relation to PI 05 above.

The key data quality concern in relation to the denominator was the inconsistent recording of diagnosis outlined above in relation to PI 05 and PI 23. As illustrated by Figure 19, many services considered that the data in relation to patients with diabetes was likely to be more reliable than the data related to patients with cardiovascular disease (CVD). 64 per cent of the services considered that all patients with diabetes in the community is captured in the CIS whilst only 52 per cent of the services that responded considered that

³⁰ Australian Institute of Health and Welfare. 2015. [*Aboriginal and Torres Strait Islander health performance framework 2014 report: detailed analyses*](#). Cat. no. IHW 167. Canberra: AIHW. Accessed June 2018.

all patients with CVD in the community is captured in the CIS. The reason given for this was the historical focus on tracking and managing patients with diabetes has resulted in more rigorous processes.

Figure 19. Data quality for patients with diabetes vs. patients with CVD³¹

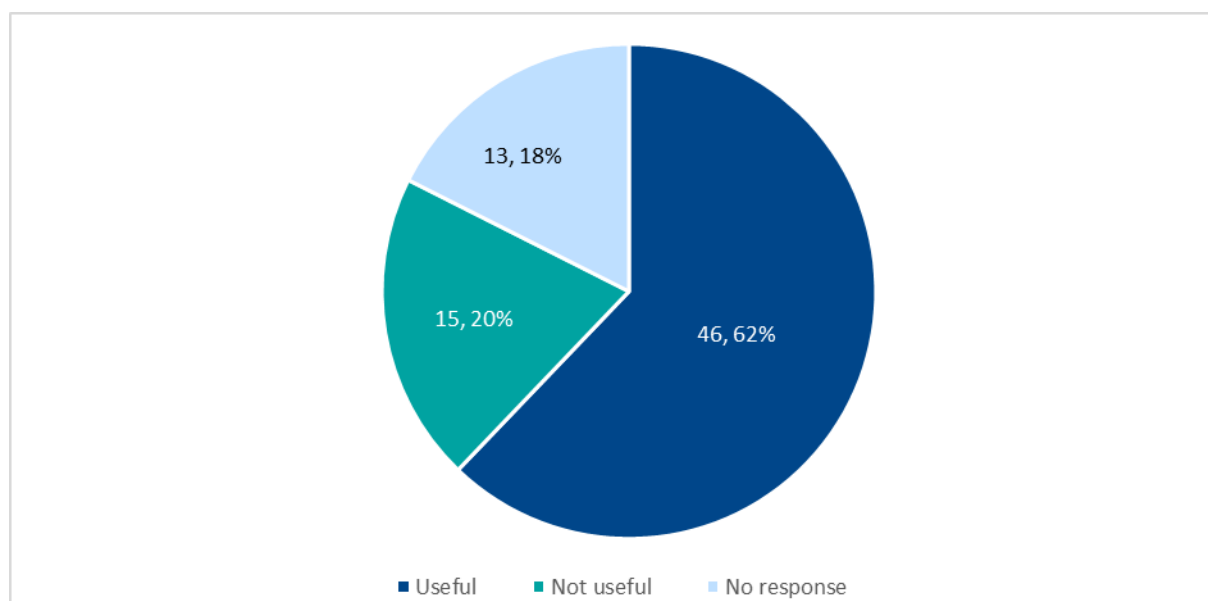


Source: Data captured from services responses recorded in the Data Quality Assessment Tool, KPMG

The value of nKPI data

As illustrated in Figure 20 below, the majority of services (62 per cent) found that nKPI data, particularly the in scope items, were clinically relevant and thus relevant to understanding their performance and for CQI activities.

Figure 20. Usefulness of nKPI for CQI activities



Source: Data captured from services responses recorded in the Data Quality Assessment Tool, KPMG

The services in the NT and SA were less likely to find nKPIs relevant for their CQI activities, with services in the NT preferring instead to use the Northern Territory Aboriginal Health Key Performance Indicators (NT AHKPI).

³¹ No response was recorded for one service regarding capturing data of patients with CVD.

Table 18. Usefulness of nKPI for CQI activities

Response	NSW / ACT	VIC / TAS	QLD	SA / NT	WA
Useful	53%	71%	69%	54%	58%
Not useful	21%	0%	19%	46%	17%
No response	26%	29%	13%	0%	25%

Source: Data captured from services responses recorded in the Data Quality Assessment Tool, KPMG

A number of services identified that they found other data items of equal or more relevance in understanding the impact of their service in improving the health and wellbeing of their community. A number of services nominated that there should be an increased focus on data related to prevention and early intervention and mental health in any future refresh of the indicators.

Some services raised concern in relation to the data quality of items related to baby birth weight (PI 01, PI 02). Two particular challenges were nominated. The first, and most significant, was that this information was held by other providers and services faced ongoing difficulty gaining access. The second challenge was the manual burden of entering this information once received into the CIS.

Common recommendations

Many of the recommendations in relation to data management, CIS and OSR apply here and, if achieved, would also have a positive impact on nKPI data quality maturity.

Outlined below are recommendations specific to nKPI data quality.

Table 19. Recommendations in nKPI data quality

Number	Recommendations
D1	Workflows
D1.1 (HP)	Develop patient pathways and workflows to support health assessment follow up and referred allied health services to improve service delivery and to optimise revenue.
D2	CQI process
D2.1 (HP)	Engage sector leadership, particularly through NACCHO and HS DAG, in setting future key performance indicators. This would support the ongoing commitment of the leadership through ensuring that indicators are informed by the deep understanding of their communities and are relevant to measuring the impact of the services in meeting need.
D2.2	Ensure approval of nKPI data is supported by a process of review which involves relevant clinical team members (prior to approval of submission into the Health Data Portal).
D2.3	Monitor and act on nKPI data as part of a regular structured CQI process, involving all staff.
D2.4	Undertake a CQI project with a particular focus improving the consistent recording of diagnosis by the GP workforce.

Number	Recommendations
D3	Induction and training
D3.1	Develop and implement a program of training to GPs, Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners on the purpose of and the process to support health assessment follow up and allied health follow up.
D4	Reporting
D4.1 (HP)	Develop reports, using consistent data that allow services to understand performance in the context of national trajectories and in comparison with other services. [Complete]
D5	Clinical terminologies
D5.1	Ensure use of consistent clinical terminologies in relation to pathology tests.

4. MBS

4.1. Assessment approach

4.1.1. Overview

The MBS activity aimed to identify the key enablers and barriers to MBS claiming for services. The purpose of the MBS activity was to provide services which opted for a site visit with support to improve claiming and to inform additional support, education and incentives required to lift the maturity of all services.

There are a range of MBS item numbers that are specifically designed to fund the model of primary health care delivered to Indigenous Australians. While these MBS item numbers incentivise the delivery of a range of specific services, historically MBS funding alone has not been a viable funding stream for the kind of comprehensive model of care required for services to meet their communities' needs. Some of the reasons for this include the greater health need and reduced capacity to pay of the population services support, the requirement to deliver culturally appropriate care and, for many services, the requirement to operate in areas beyond the normal medical infrastructure.

Services are able to claim MBS whilst also receiving Government funding via the IAHP because they have an exemption to s19 (2) of the *Health Insurance Act 1973* which otherwise precludes the payment of MBS benefits for professional services if an agreement with a Local, State or Commonwealth Government is already in place. Services are funded through a range of sources including IAHP, grants from PHNs and state government funding. The accessibility of both government funding and MBS reimbursements has created a degree of funding certainty which has allowed services to operate in areas where a fee for service model is not viable and to provide a comprehensive model of care not fully supported by MBS reimbursement.

However, while it is acknowledged that there are a range of operational and environmental factors which impact on services' ability to make a fee for service model, such as the MBS, viable in supporting a comprehensive model of care, there is an opportunity for services to improve MBS claiming of existing activity as well as ensure that future delivery of eligible activity is appropriately supported by MBS funding.

The scope of this activity focused on Medicare Health Assessment (health assessment) for Aboriginal and Torres Strait Islander People and follow up care, for a sample of 15 services. This focus recognised that for many services, health assessments formed an integral part of their clinical model and the starting point for a cycle of planned care. The scope of the MBS activity included the following:

- Identification of a sample of services to invite to participate in the MBS activity. The sampling aimed to obtain a representative sample of services across a range of factors that were identified in the first stage of work as impacting on MBS claiming, including: size of the service; degree of remoteness; clinical information system used; workforce model; and employment models. The sample also aimed to include a selection of services that had already participated in the data quality assessment (referred to as Stage 1

services) as well as a selection of services that were yet to participate in the data quality assessment (referred to as Stage 2 services).

- Consultation with the services that agreed to participate in the MBS activity to identify opportunities for improving MBS claiming, identify the key enablers for making these improvements and quantify the opportunity for increasing MBS reimbursements for eligible activity.
- Analysis of MBS data relating to a selection of Medicare Health Assessment (health assessment) for Aboriginal and Torres Strait Islander People (715) including, the follow up services for Practice Nurses or Aboriginal Health Workers/Practitioners (10987, up to 10 services per calendar year) and referred allied health services (81300, 81305, 81310, 81315, 81320, 81325, 81340, 81345, 81350, 81355 and 81360, up to 5 services per calendar year).
- Review of MBS claiming for a random sample of approximately 50 occasions of service for a health assessment. This review aimed to identify opportunities for increasing claiming for eligible activity and to validate the observations obtained through consultation with the service and analysis of the MBS data provided by the Department.

Based on this scope this report delivers the following outputs:

- A description of the key enablers and barriers to effective MBS claiming, illustrated by case studies.
- A description of the characteristics that impact on effective MBS claiming (for example remoteness, nurse-led post, doctor employment models).

The following items were out of scope:

- Consideration of whether the MBS reimbursement for the range of MBS services considered as part this project covers the actual cost of delivering the services.
- Review of the eligibility criteria for claiming the range of MBS item numbers considered as part of this project.
- Compliance with the eligibility criteria and claiming rules associated with the MBS.

4.1.2. Assessment method

The approach to the maturity assessment for the MBS activity recognised that there are a range of factors that impact on effective MBS claiming in services. An assessment tool was developed, informed by Australian Bureau of Statistics (ABS) data quality dimensions along with three focus areas of assessment which included the following:

- Systems and processes – this focus area explored whether there were the systems and processes to support consistent and accurate MBS claiming for eligible activity.

- Leadership and organisational culture – this focus area explored whether the leadership and other staff in the organisation demonstrated a commitment to the importance of MBS reimbursement for supporting the delivery of primary health care that meets the needs of the local population.
- Service delivery and workforce model – this focus area explored the extent to which the cycle of care and preferred service delivery was known by all staff and the MBS items could be associated with activities within the cycle of care.

The tool guided the collection of assessment data in a consistent manner using a mixed method approach:

- Quantitative analysis of service MBS data for the period 2016-17 to 2017-18, with a focus on the MBS item numbers associated with the health assessment. As discussed above, the in-scope MBS item numbers included: 715, 10987, 81300, 81305, 81310, 81315, 81320, 81325, 81340, 81345, 81350, 81355 and 81360.
- As part of this analysis, the service's reported data was compared to MBS claims for the in-scope item numbers in similar sized services and services with a similar degree of remoteness.
- A two day site visit at the service, where responses were collected for the assessment questions against each area of focus, using the following methods:
 - Interviews.
 - Documentation review.
 - Observations.
 - Case file review (de-identified) of a random sample of MBS claims for 50 clients who have had health assessments.

The tool supported analysis and assessment of the claiming maturity of each service along a five point continuum ranging from Awareness (the lowest level of maturity) to Optimised (the highest level of maturity). The assessment tool set out mandatory and explanatory questions, which were developed in cooperation with the Department and informed by consultation with CIS vendors, NACCHO, SSOs, and FMAC³² and HS DAG.

Following the site visit, a summary report was prepared for each service, outlining:

- The overall maturity rating.
- The maturity rating for each area of focus.
- Better practice identified.
- Key observations.
- Areas for improvement, which were distinguished as 'Areas for Immediate Action (as soon as possible)' or 'Other Areas of Improvement (to be considered for the future)'.

³² FMAC has been superseded by the CPHC SAC

When identifying opportunities for improvement, the following areas of focus were considered:

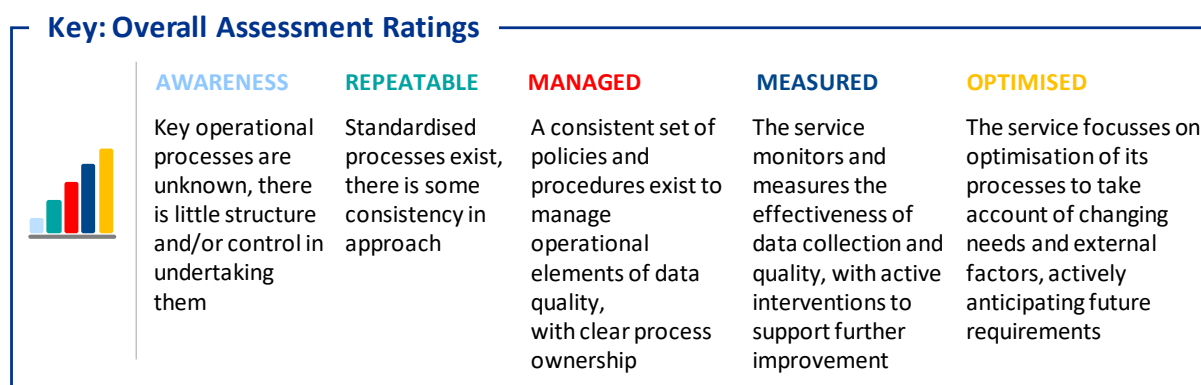
- Opportunities for local improvement: identify and make recommendations to support improved claiming for each service.
- Opportunities for sector wide improvement: identify and make recommendations to support more effective claiming across the sector, including for the development and delivery of education and support for services.

As part of each site visit, services were asked to identify a target for additional MBS claims for each type (e.g. health assessment, follow up and referred allied health) of in-scope item numbers. Services identified these targets based on the unique operational and environmental contexts in which they operate in.

Each service had the opportunity to review their draft report to ensure the information was accurately captured before the report was finalised.

Following each site visit, responses to interviews and practices observed were captured within the assessment tool which assisted the team in forming the indicative ratings for each service. A consistency review was undertaken by a senior leadership team from KPMG to ensure fairness in ratings across multiple teams, prior to the finalisation of ratings for each service. The five overall assessment ratings used to describe the maturity for each service for the three key areas of focus (systems and processes, leadership and organisational culture, and service delivery and workforce model) and their overall maturity, are provided in Figure 21 below.

Figure 21. Overall assessment ratings



Source: KPMG

4.1.3. Limitations

A number of limitations to the anticipated approach have been identified. These limitations include the following:

- A sample of 15 services participated in the MBS activity which constitutes 6 per cent of the total number of all services which receive funding under the IAHP (250 in total) and 12 per cent of Aboriginal Community Controlled Health Services (122 in total).³³
- The MBS activity considered only a subset of MBS item numbers which were identified during Stage 1 as being a key part of the cycle of care in many services. These MBS item numbers are also considered a key differentiator between services providing care to a predominantly Aboriginal and Torres Strait Islander Population and those that are not.
- The in-scope MBS item numbers represent 17 per cent of the total volume of MBS claims made by the sample of 15 services which indicates that whilst health assessments and the associated follow up consultations constitute a significant amount of the total volume of MBS claims, there are a high volume of claims being submitted against other MBS item numbers which were not considered as part of the scope of this project and could provide further opportunities for improving MBS claiming.
- There is a high degree of variability in services' claiming against the in-scope MBS item numbers compared with other MBS item numbers. For example, in some services, claims for the establishment and review of GP Management Plans and/or Team Care Arrangements (721, 723) constitutes a much higher proportion of service claiming than the in-scope MBS item numbers. This claiming trend was identified after analysis of the MBS data and indicates that some services claim against a range of MBS item numbers to reimburse the care delivered to their communities as part of a comprehensive cycle of care, including those that are not specific to Indigenous health.
- The MBS activity was designed to inform policy and planning and as such was not focused on compliance with the MBS claiming rules or eligibility criteria. For this reason, the MBS activity did not constitute an audit of data and practices but only an informal review involving the four methods described in Section 4.1.2.
- The opportunities identified for improving MBS claiming are likely to be impacted by other operational and environment factors not observed during the site visit, for example, workforce turnover.
- It is acknowledged that to realise the opportunity for improving MBS claiming, a series of preparatory steps will need to be taken to provide appropriate support to services. Advice regarding the preparatory steps is outlined in Section 4.4. These steps are based on observations during site visits and are not intended to be a comprehensive list of the support and considerations required to improve claiming for the in-scope MBS item numbers across the sample of services or the broader sector.

The recommendations provided to services as part of this project are described in Section 4.3 and present examples of the improvements that can be made in the three focus areas within scope of this project.

³³ There are 128 government run Aboriginal health services across Queensland and the Northern Territory.

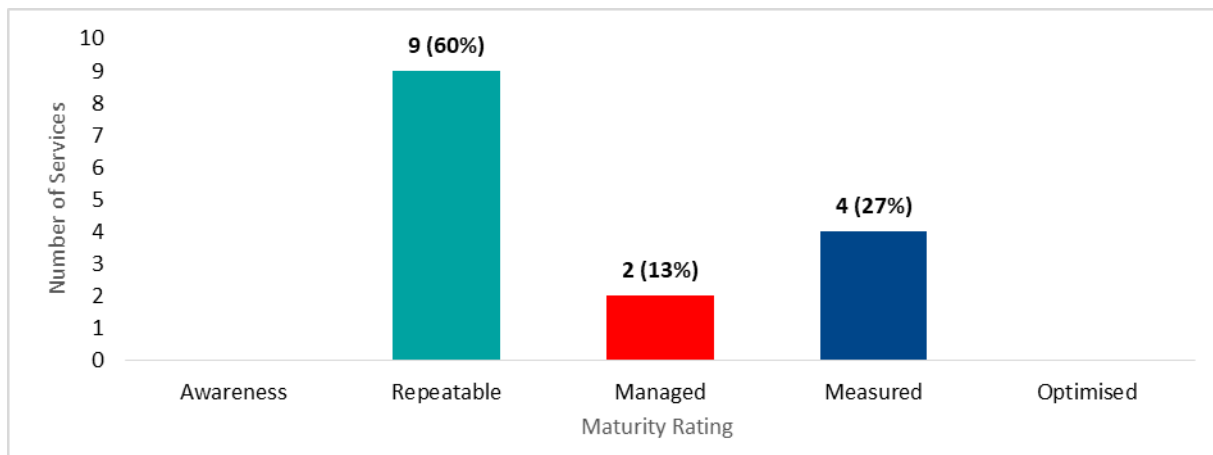
4.2. Summary assessment

4.2.1. Maturity assessment rating

This section signals the types of services that commonly have low maturity ratings in particular focus areas (i.e. a rating of 'Awareness' or 'Repeatable') and therefore the types of services that may require further support to improve their MBS claiming. Due to the small sample size, the assessment maturity ratings are not provided by jurisdiction.

Of the 15 services that completed an assessment, 4 were assessed as having a mature approach to MBS claiming. This is presented in Figure 22.

Figure 22. Overall maturity ratings



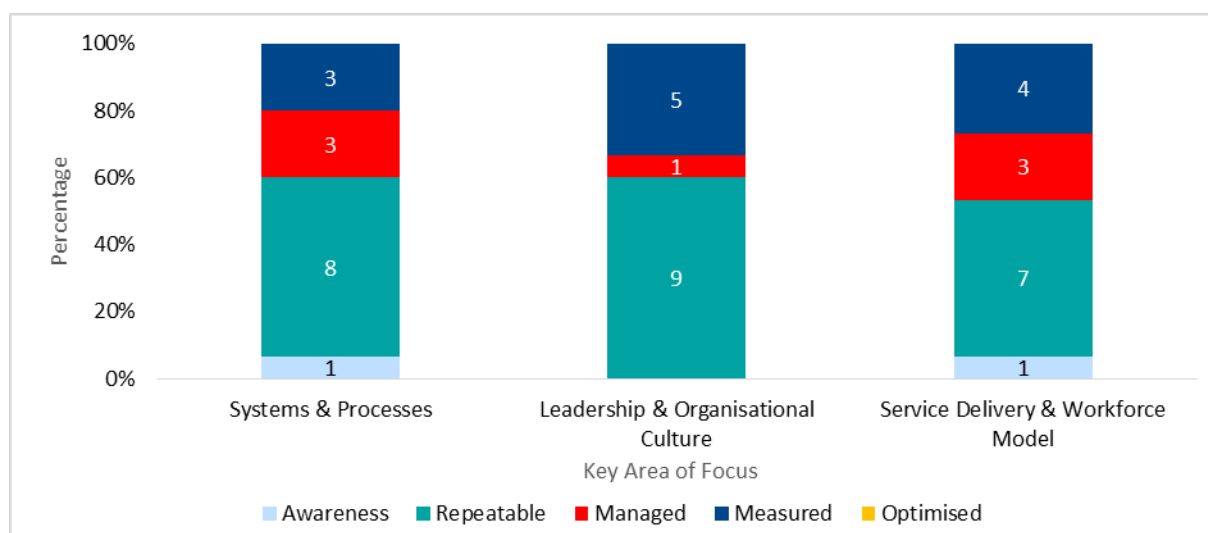
Source: KPMG

Noting that no service received an overall Awareness or Optimised rating (which is believed to be a function of the sample selection in services who opted in), in this report ratings have been grouped as:

- Awareness / Repeatable.
- Managed.
- Measured / Optimised.

Figure 23 illustrates the summary of ratings by the key area of focus. Of the four domains, the highest number of services achieved Repeatable across all domains.

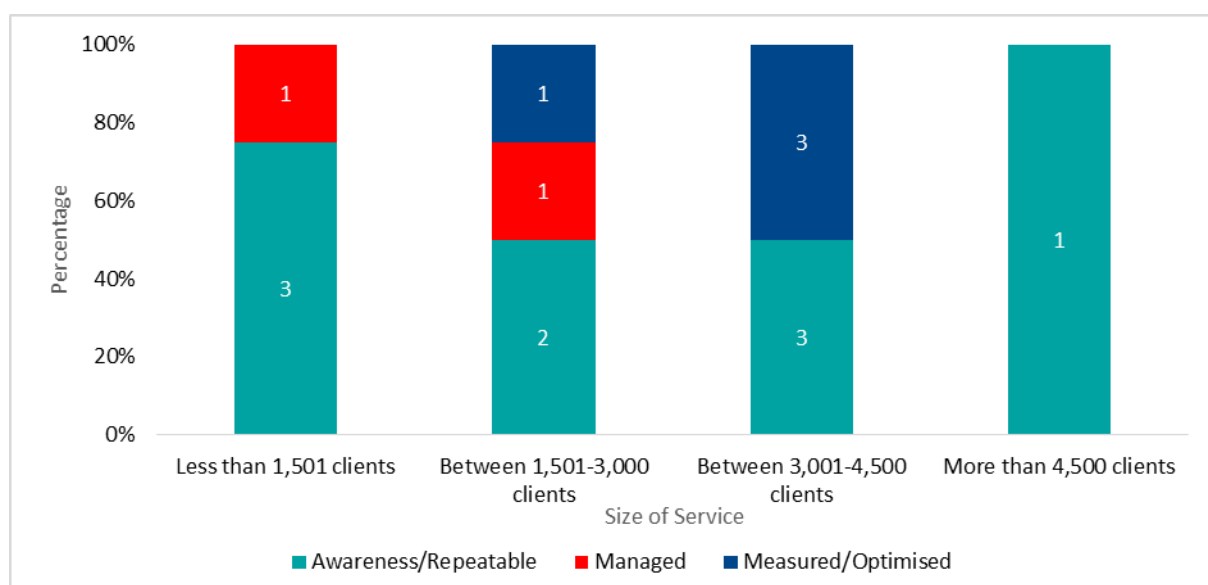
Figure 23. Summary of ratings by the key area of focus



Source: KPMG

Summary analysis shows there appears to be relationship between the overall rating and the size of the service. As illustrated in Figure 24 of the 6 services with between 3,001 and 4,500 clients, 50 per cent had a mature approach to MBS claiming. It should be noted that a limitation of the MBS analysis is the size of the sample, and caution should be taken when making assumptions based on a sample size of 15.

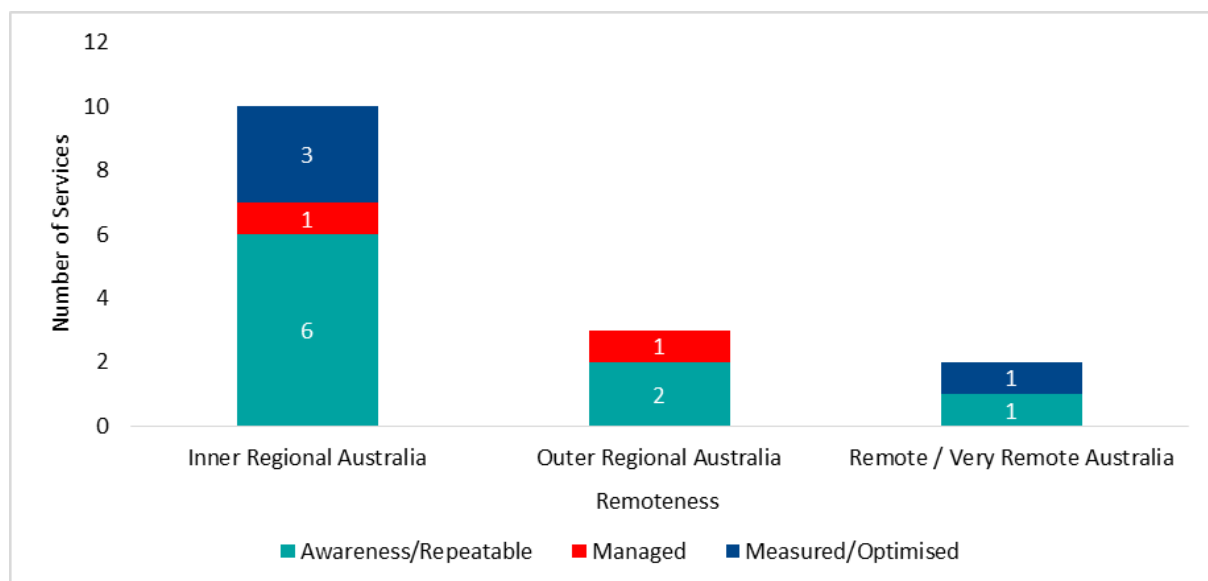
Figure 24. Overall maturity assessment rating by size of the service



Source: KPMG

Summary analysis shows there appears to be no clear relationship between the maturity and remoteness of the services involved in the assessment. The ratings by remoteness are provided in Figure 25 below.

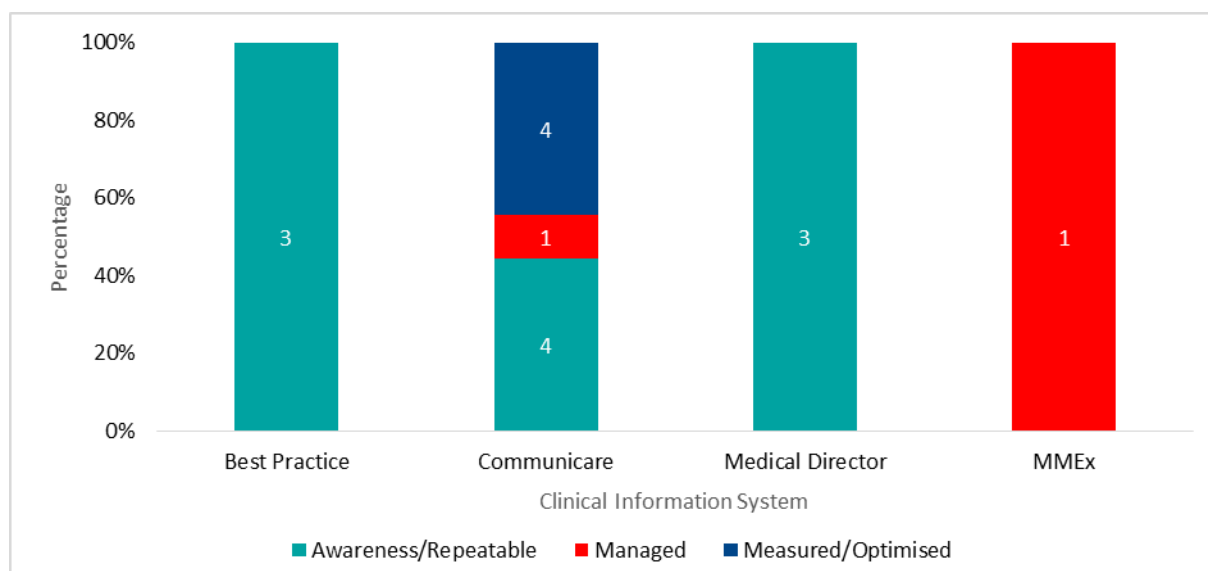
Figure 25. Overall maturity assessment rating by remoteness



Source: KPMG

The majority of services (60 per cent) involved in the assessment used Communicare as their CIS. As illustrated in Figure 26, of the 4 services with a Measured / Optimised approach to data quality, all used Communicare. The configurability of Communicare provides services with an opportunity to capture their full range of activity. It should be noted that a limitation of the MBS analysis is the size of the sample, and caution should be taken when making assumptions based on a sample.

Figure 26. Overall maturity assessment rating by CIS



Source: KPMG

Overall, 15 services participated in the assessment, located in all States and Territories in Australia (except ACT and Tasmania). The assessment found that 4 services had a mature approach to MBS claiming. The claiming practices of services involved in the assessment were varied. Mature services, those rated as Measured or Optimised, had a defined model of care that was well understood by all staff, used MBS data to inform

improvements in MBS claiming practice, clearly communicated to all clinicians the MBS item numbers associated with the model of care and provided ongoing support and education to staff about eligibility criteria for claiming MBS reimbursements as well as a professional development pathway for Aboriginal Health Workers.

Services with a lower level of maturity, rated as Managed or below, varied between having no standardised process for claiming and having some consistency in the process for claiming across staff groups. Services with a lower level of maturity usually had a strong commitment to MBS reimbursements among leadership but struggled to sustain this commitment across staff groups. These services also commonly experienced high turnover in some staff groups (e.g. Aboriginal Health Workers) and / or a high reliance on a locum medical workforce. For these services, their MBS claiming did not accurately and consistently reflect their delivery of eligible activity which meant that there was an identified opportunity for claiming additional MBS reimbursements.

4.2.2. Comparison with Data Quality Maturity Ratings

Figure 27 below illustrates the distribution of MBS maturity ratings and data quality maturity ratings, for the 15 services that were involved in the MBS activity. For the sample of services involved in the activity:

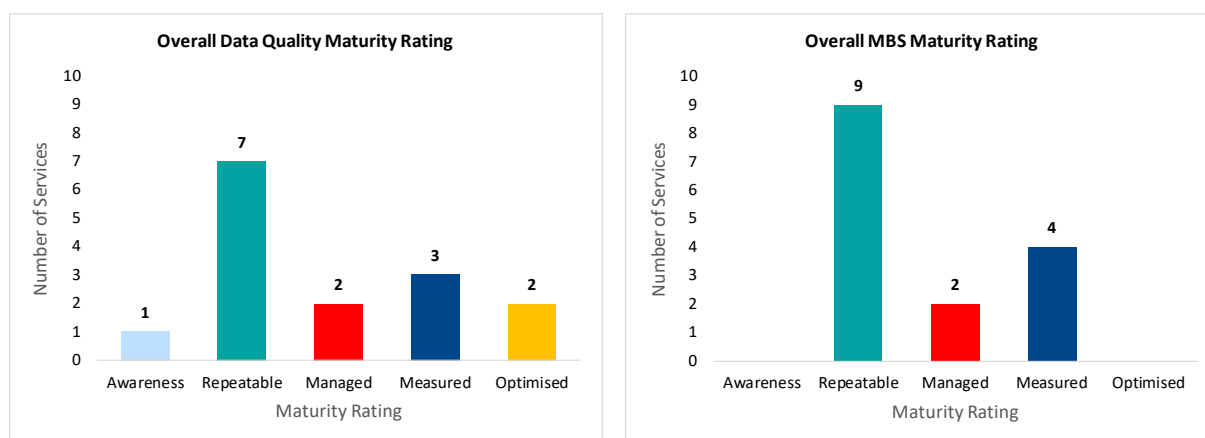
- Nine services completed the data quality site visit in Stage 2.
- Six services completed the data quality site visit in Stage 1, and the follow up consultation in Stage 2.

Three services involved in the follow up consultation self-assessed their data quality maturity to have increased since the data quality assessment was completed, with the remaining three services self-assessing their maturity at the same level as was received in the Stage 1 data quality assessment. The three self-assessed movements for data quality maturity were:

- One service self-assessed their maturity to have moved from Repeatable to Managed.
- One service self-assessed their maturity to have moved from Managed to Measured.
- One service self-assessed their maturity to have moved from Repeatable to Measured.

As the MBS activity was completed during the same time period as the Stage 1 follow up consultation, the services self-assessed rating from the follow has been used for the analysis below, to ensure that improvements made since the data quality assessment are considered in the comparison, noting that the rating is a self-assessment provided by the service, rather than an assessment made by KPMG.

Figure 27. Overall data quality maturity rating (received during the Stage 2 data quality assessment or self-assessed during the Stage 1 follow up consultation) and the associated overall MBS maturity rating for the 15 services involved in the MBS activity



Source: KPMG

The figure above illustrates that there is a relationship between the overall maturing ratings received by services for the MBS activity, and the services data quality maturity rating (received during the Stage 2 data quality assessment or self-assessed during the Stage 1 follow up consultation). In particular:

- Of the five services that have a Measured or Optimised rating for their data quality maturity (either received during the Stage 2 assessment or self-assessed during the Stage 1 follow-up consultation), four services (80 per cent) received a Measured rating for the MBS activity.
- Of seven services that have an Awareness or Repeatable rating for their data quality maturity (either received during the Stage 2 assessment or self-assessed during the Stage 1 follow-up consultation), five services (71 per cent) received a Repeatable rating for the MBS activity.

4.3. Observations by key areas of focus

This section of the report outlines the key observations across the three focus areas for all services in the sample. The purpose of this section is to describe the key characteristics of mature services and to also identify the key challenges for those services with relatively low maturity in MBS claiming.

This section includes a description of the key insights associated with these characteristics and challenges. Each key characteristic or challenge has also been assessed against the extent to which the factor is within the services' locus of control to address (i.e. operational) or not (i.e. environment). Where appropriate this section sets out recommendations regarding the preparatory work and support needed in order to improving claiming across the sector.

4.3.1. Systems and processes

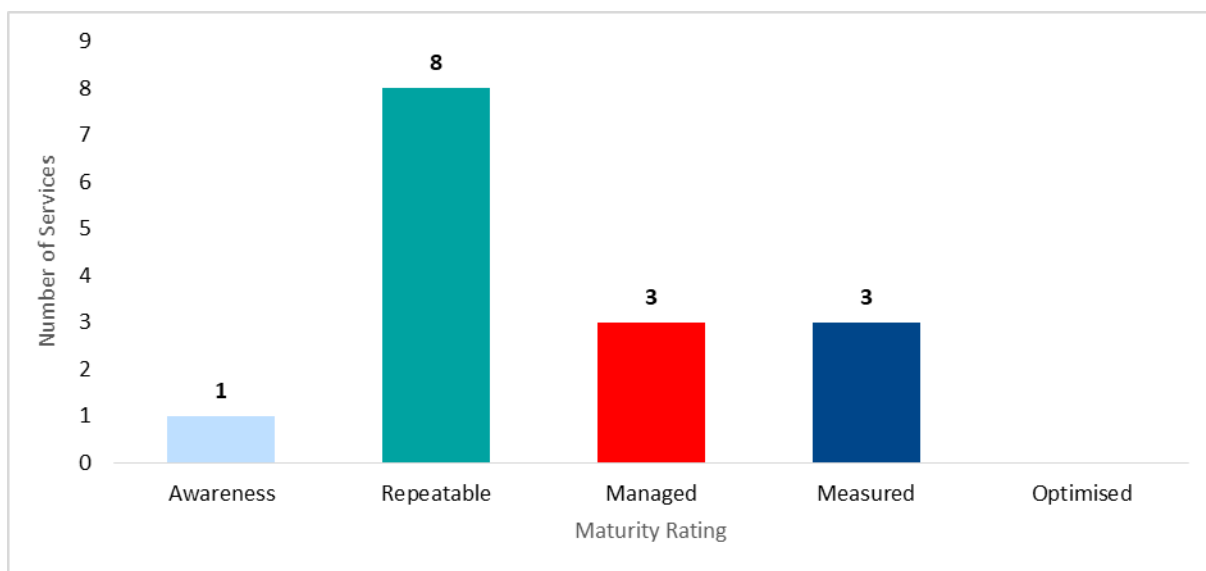
The focus of the systems and process domain was on exploring the systems and processes to support consistent and accurate MBS claiming for eligible activity. This was explored using a qualitative process of interviews and document review supported by analysis of the MBS data and the case file review.

Summary of systems and processes results

The assessment found that the sample of services did not have a mature approach to systems and processes underpinning MBS claiming.

As outlined in Figure 28, a Repeatable approach was most common for the systems and processes domain (8 services), followed by a Managed and Measured approach (3 services each).

Figure 28. Summary of systems and processes ratings



Source: KPMG

Characteristics of a mature approach to systems and processes for MBS claiming

The assessment found a consistent set of characteristics across services with a mature approach to systems and processes. These services often had a standardised process to support MBS claiming that was understood by all staff groups and enabled by the CIS. Mature services also shared MBS data with staff to stimulate improvement activities and promote accountability. Services with a mature approach usually had a dedicated resource for reviewing all claims and following up with staff to advise them of opportunities for improvement. A summary of these characteristics is set out below:

- **Consistent, documented and well understood workflows (Operational):** Services with clear workflows, aligned to their model of care, are more likely to deliver and accurately capture and claim for all eligible activity and for these claims to be paid. In these services, each team member, from reception staff to Aboriginal Health Workers and GPs have a clear understanding of this workflow and their role in supporting it.

Claiming processes across mature services varied. Some services allowed clinicians to claim on their own behalf, others provided clinicians with tools, such as MBS checklists, to identify the MBS item number/s and an administrative staff member would then submit the claim on their behalf.

A service located in outer regional Australia has established workflows to support accurate MBS claiming. On completion of a service clinical staff inform (either verbally or through CIS) the Medicare Officer who

reviews the service record in the CIS to ensure relevant data is recorded and the appropriate MBS item is claimed.

- **Proactive monitoring of MBS data (Operational):** Mature services are more likely to actively monitor their MBS data to inform opportunities for improvement and service planning. These services use regular monitoring to understand whether their model of planned care is being effectively delivered and supported by reimbursement and to identify and address points of failure, for example incomplete referrals or missed opportunities to deliver follow up care.

An inner regional service has a designated Health Informatics team who are responsible for resolving any rejected MBS claims and addressing related staff education or process improvement.

A service with between 3,001- 4,500 clients has created a dashboard and interactive analytics tool of performance against specific MBS item numbers to improve visualisation of the service's data and improve access to this information for the entire organisation.

Challenges to a mature approach to systems and processes for MBS claiming

During the site visits, services reported a number of common challenges to developing sustainable systems and processes for MBS claiming. Less mature services were likely to have few resources dedicated to education and support for MBS claiming, high workforce turnover and / or reliance on an outsourced workforce model including GP locums.

- **Limited local capacity (Operational and Environmental):** Services with limited local capacity are less likely to have a dedicated resource within their organisation to support and review MBS claiming. One service within the sample had sought to overcome this challenge through hiring a resource to work remotely to review MBS claims and provide clinical guidance.
- **Ambiguous roles, responsibilities and processes to support MBS claiming (Operational):** Services with ambiguous roles and processes are less likely to claim the full range of MBS item numbers available to them as their service staff are unsure on MBS claiming procedures.

A service located in very remote Australia has standardised process in place for MBS claiming of nurse-related items (e.g. 10987). However this process involves claiming without first checking that eligibility criteria have been satisfied (e.g. check-in that a health assessment is in place and that not more than ten 10987s have been claimed). This claiming practice increases the risk of rejected claims and the possibility of having to refund money to the Department of Human Services (DHS).

- **Processes to support follow on and referred care (Operational):** Whilst lower maturity services generally claimed effectively for health assessments, processes were not in place to support follow up and referred care. Two primary reasons were identified as contributing to this challenge:
 - There was not a consistent expectation that GPs complete a referral to support a cycle of planned care.

- There was inconsistent understanding by the GP workforce of their obligations relating to supervision of follow up care, leading to some GP's declining to provide supervision when not physically present at the service.
- **Processes to deliver and effectively claim for follow up care (Operational):** Lower maturity services lack an established cycle of care, supported by strong understanding of appropriate follow up item numbers. In these circumstances follow up care is either not planned or delivered in an ad hoc manner or the follow up care is delivered but not claimed for.

For example, a client with Type 2 diabetes might be designated by the GP as requiring a follow up for advice about healthy eating. Once this activity is delivered once, no further claims are made for 10987, even if only one or two out of a possible ten claims are made and the client re-presents again for further reviews (though other chronic disease follow ups might be claimed if the relevant plan is in place).

- **Poor understanding of Medicare eligibility and definitions (Operational):** For low maturity services this issue is compounded by a poor understanding of eligibility and definitions, particularly related to follow up care. For these services a lack of understanding results in either: a. a high number of ineligible claims; or b. a failure to claim for activity delivered. Services report that they find the advice available online or by phone inconsistent or difficult to interpret.

For example, some services claim 10987 for all nurse-led activity and assume any ineligible claims will be rejected by DHS. Other services do not claim this item number at all because they are concerned about potential audits and have previously received conflicting advice around eligibility rules.

For example, a service with less than 1,501 clients has been providing care in 2016-17 and 2017-18 that was eligible for claiming against a 10987, however they were not being claimed appropriately through the MBS due to lack of knowledge of the eligible activity which can be claimed.

- **Inconsistent approaches to referrals and follow on activity (Operational):** Services with an inconsistent approach to referrals and follow on activity are more likely to receive rejected MBS claims. Claiming for a range of non-GP item numbers which are a key part of the cycle of care in many services (e.g. 10987 and the 813xx³⁴ suite of MBS item numbers) is reliant on:
 - The level of comfort that GPs have with having staff claim on their behalf and using their provider number (e.g. 10987).
 - The GPs understanding of the referral process.
 - The capacity of staff to check how many claims are remaining.

³⁴ 813xx refers to the following in-scope MBS item numbers: 81300, 81305, 81310, 81315, 81320, 81325, 81340, 81345, 81350, 81355 and 81360.

There is an opportunity for services to use Provider Digital Access (PRODA), to identify how many claims are remaining for clients. Some services found that time pressure limited the use of PRODA, whilst in other services digital literacy of administrative staff was a constraint.

A service with between 3,001- 4,500 clients has no consistent process in place for GP referrals to AHPs and allied health services associated with a health assessment (715), there is also no consistent process for claiming these follow up items. This has resulted in more than the number of allowed referrals and MBS claims for particular items.

Common recommendations

Based on the observations made regarding the maturity of MBS claiming among the sample of 15 services visited as part of this project, it is clear that there is an opportunity for improving MBS claiming among this sample of services and increasing MBS reimbursements. The opportunities for improving MBS claiming related to systems and processes are included in Table 20.

Table 20. Recommendations in systems and processes

Number	Recommendations
E1.1	Consider developing an MBS claiming support tool to guide clinicians on eligible MBS item numbers and the referral pathways to allied health and other support services. Consider developing a process to review and update the MBS claiming support tool on a regular basis.
E1.2	Investigate and implement methods for more advanced MBS claiming analytics to build on your existing reporting practices. This may include analysis of how well claiming practices align with your practice population's health needs, workforce capacity, and the level of alignment between related MBS item numbers (e.g. health assessments and follow up items; GP management plans and follow up items; GP mental health plans and follow up items).
E1.3	Review MBS data periodically and assess whether the volume and type of MBS claims aligns with service expectations of eligible activity.
E1.4	Resolve accreditation and eligibility concerns preventing 10987 claiming by service staff.
E1.5	Document the MBS claiming process and how this supports the services' model of care. Ensure all relevant staff are aware of the 10987 and 81300 follow up items and are familiar with the process and expectations relating to these services. This can be supported with revisions to the model of care and workflow as well as staff education and performance monitoring.
E1.6	Support services to improve the clarity of their processes and to establish standardised workflows (e.g. service may be provided with examples of efficient claiming workflows for their CIS).

4.3.2. Leadership and organisational culture

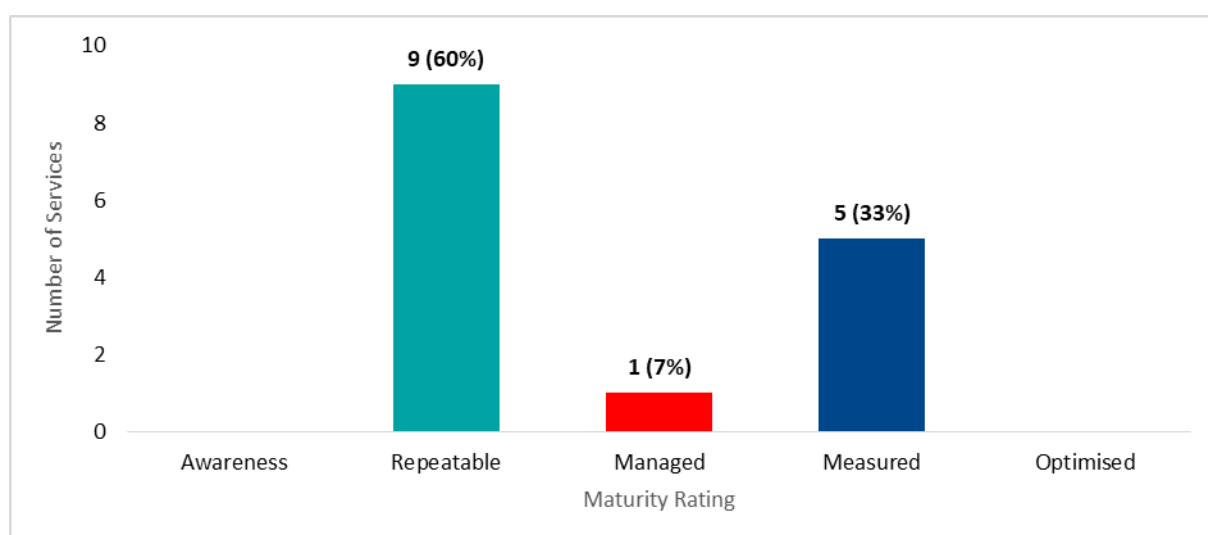
The focus of the leadership and organisational culture domain was on exploring the organisational commitment to the importance of MBS reimbursement for supporting the delivery of primary health care that meets the needs of the local population.

Summary of leadership and organisational culture results

The assessment found that most services demonstrated a strong commitment by leadership to MBS claiming, however this commitment has not translated into an organisational culture that has embraced MBS as important source of service revenue.

As outlined in Figure 29, 33 per cent of services achieved a mature approach for leadership and organisational culture.

Figure 29. Summary of leadership and organisational culture ratings



Source: KPMG

Characteristics of a mature approach to leadership and organisational culture for MBS claiming

The assessment found a consistent set of characteristics across services with a mature approach to leadership and organisational culture.

- **Leadership commitment (Operational):** Whilst 93 per cent of services in the sample expressed a leadership commitment to MBS as an important source of revenue, mature services were distinguished by active engagement of executive and board level leadership in communicating the value of this revenue source in supporting and growing comprehensive service delivery to their community. Often this extended to focusing resources on establishing and monitoring MBS targets and ensuring all staff understood the item numbers which supported their cycle of care. Services that share their MBS data back with staff and

ensure a robust feedback loop is in place are more likely to improve MBS claiming through uplifting the knowledge of the whole organisation.

For example, an inner regional service engages closely with the board regarding the operations as well as the strategic direction of the service. This close engagement ensures that clinicians understand the importance of MBS revenue and the correct processes for eligible MBS claiming

- **Staff engagement (Operational):** These services often had a strong commitment to MBS claiming across all staff groups, a commitment to CQI and an interest in ensuring that all eligible activity is claimed in order to reinvest MBS reimbursements in primary health care. Mature services also had a strong sense of accountability and ownership among individual clinicians for MBS claiming. These clinicians prioritised quality care over funding but also sought to claim MBS reimbursements wherever eligible activity was part of their service delivery.

An outer regional service believes that staff at the organisation understand MBS revenue is important to the provision of primary health care services to the community. The service has identified that increasing staff understanding of the MBS item number relevant to their roles would help strengthen this understanding and has potential to further improve claiming practices.

- **Commitment to training and education (Operational):** Services with a commitment to ongoing training and education were more likely to build a workforce that felt confident in claiming for all eligible activity. This was found to be particularly true for Aboriginal Health Worker and Practitioner staff new to claiming. For example, some services will periodically close clinics on particular days to deliver internal staff education including advice about data quality and opportunities for improving MBS claiming.

A number of services have a professional development pathway for administration staff to become Aboriginal Health Workers and for Aboriginal Health Workers to become Aboriginal and Torres Strait Islander Health Practitioners. However, services report that, even with a clear professional development pathway, they struggle to retain Aboriginal Health Worker trainees. A reason for this identified by services is the requirement for trainees to travel away from community for study. Some services have sought to overcome this challenge through working with providers to train on site, with early positive outcomes.

An inner regional service has established supported professional development pathways for all Aboriginal Health Workers with Certificate IV to become Aboriginal and Torres Strait Islander Health Practitioners, to better meet community need and improve MBS claiming for services delivered as part of the model of care.

Challenges to a mature approach to leadership and organisational culture for MBS claiming

During the site visits, services reported a number of common challenges to developing a strong leadership and organisational culture to support MBS claiming for eligible activity.

- **Lack of visibility of MBS service data (Operational):** Less mature services were less likely to use their MBS data to support continuous improvement. Some services actively monitor their MBS claiming however do not share this data with staff to demonstrate progress or key trends.
- **Absence of robust training and education programs (Operational):** Less mature services were less likely to have formalised induction and ongoing training available for employees. Lower maturity services were more likely to utilise training ‘on the job’ as the key method of support. In the absence of other education this reinforced poor practices across services.

A service with between 3,001- 4,500 clients identified they have no training or guidance provided to clinicians about the preferred cycle of care for service and the associated MBS item numbers. For this reason, clinicians at the service were unsure about the MBs item numbers associated with non-GP follow up consultations, such as allied health follow up item numbers.

- **Engagement of clinical leadership (Operational):** Less mature services were less likely to have strong clinical leadership by GPs within the service. Services with GPs in clinical leadership positions, who had a strong culture of MBS claiming, had a stronger perception of leadership commitment to MBS claiming. Less mature services were more likely to have a disconnect between the executives commitment to MBS claiming and clinic level commitment.

Common recommendations

Based on the observations made regarding the maturity of MBS claiming among the sample of 15 services visited as part of this project, it is clear that there is an opportunity for improving MBS claiming among this sample of services and increasing MBS reimbursements. The opportunities for improving MBS claiming related to leadership and organisational culture include the following:

Table 21. Recommendations in leadership and organisational culture

Number	Recommendations
F1.1	Ensure that all staff understand the importance of MBS claiming and the workflow required to process MBS claiming for eligible activity.
F1.2	Consider introducing clinic level stretch targets for MBS reimbursements, aligned to the cycle of care, to encourage responsibility and ownership for data quality and MBS reimbursements across all staff groups.
F1.3	Provide induction and ongoing education for staff who are eligible to claim MBS reimbursements so that there is a consistent understanding of what constitutes eligible activity in the service’s cycle of care and how to appropriately claim MBS funding.
F1.4	Identify strategies to support clinical staff in actively promoting follow up services to clients who have received a health assessment and are not in a chronic disease management cycle of care (i.e. clients who have a GP management plan).

Number	Recommendations
F1.5	Consider investigating and applying workforce incentive models, this may assist in increasing the number of health assessments and associated follow up items claimed.
F1.6	Consider presenting data relating to MBS claims and reimbursements back to service staff as part of regular clinic meetings (e.g. monthly or quarterly assessment of progress against MBS targets).

4.3.3. Service delivery and workforce model

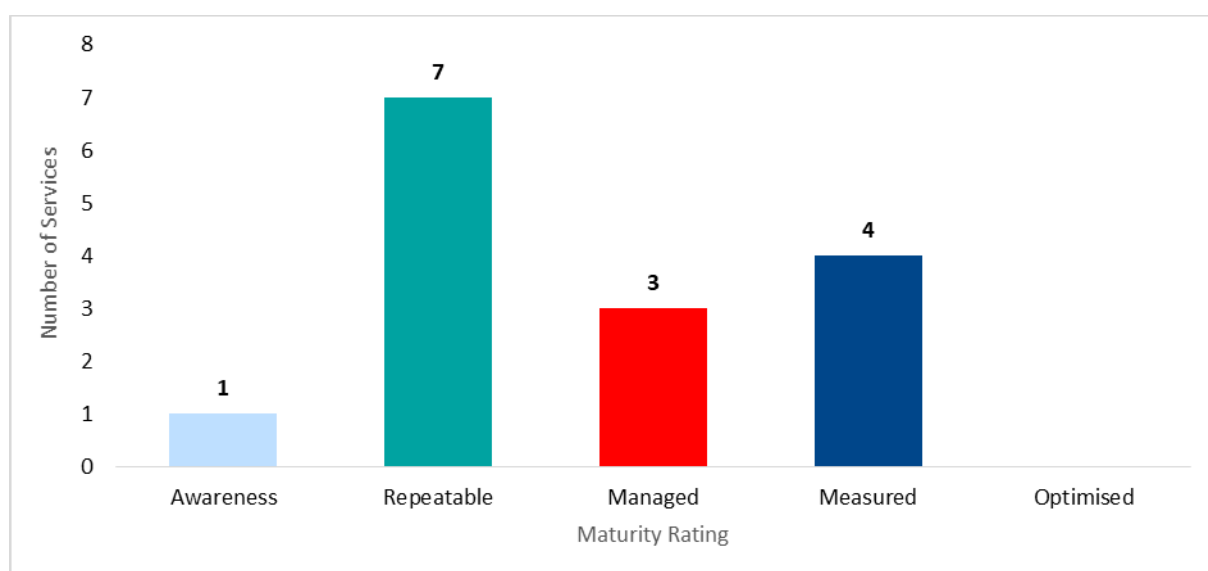
The focus of the service delivery and workforce model domain was on exploring the extent to which the cycle of care and preferred service delivery model was known by all staff. This domain also considered the extent to which staff were aware of how their role contributed to the cycle of care and what MBS items could be associated with activities within the cycle of care.

Summary of service delivery and workforce model results

The assessment found that the service delivery and workforce model did not always support MBS claiming.

As outlined in Figure 30, a Repeatable approach was the most common for service delivery and workforce model (7 services), followed by a Measured approach (4 services).

Figure 30. Summary of service delivery and workforce model ratings



Source: KPMG

Characteristics of a mature approach to service delivery and workforce model for MBS claiming

The assessment found a consistent set of characteristics across services with a mature approach to service delivery and workforce model. These services often had a consistent understanding of the preferred cycle of

care across all staff groups and utilised all staff groups in delivering the model of care (e.g. emphasised the importance of nurses, Aboriginal Health Workers, Aboriginal and Torres Strait Islander health practitioners and allied health as well as GPs).

- **Established model of care (Operational):** Whilst there was significant variability in workflows to reflect different practices amongst services, a typical workflow encompassed the following steps:
 - A process in place to recall patients when a health assessment was due (with mature services leveraging PRODA to identify whether patients had health assessments claimed within the last year);
 - A process to complete the health assessment, with a Health Worker, Health Practitioner or Practice Nurse completing the pre observations before the patient seeing a GP to complete the remainder of the assessment;
 - A clear expectation that the GP indicates any follow up care required and completes the appropriate referral process and paperwork;
 - Systems in place to deliver follow up care either opportunistically (when a patient attends for another reason) or through planned recall. This includes a clear understanding of the GP provider number; and
 - A clearly understood mechanism for a GP to supervise care delivery when not physically present.

A service with between 1,501-3,000 clients has a defined cycle of care which begins with the health assessment and leads on to GP management plans and/or mental health plans as well as the review of these plans. As part of this cycle of care, clients meet with an Aboriginal Health Worker, Aboriginal and Torres Strait Islander Health Practitioner or Practice Nurse before seeing the GP. The service considers that this cycle of care is known by all staff but there is an opportunity for more consistent implementation which would support an increase of MBS claiming for all eligible activity in the cycle of care.

- **Mature use of the CIS (Operational):** Mature services effectively use their CIS to support the delivery of planned care and effective claiming. These services use prompts such as flags and reminders that support their chosen cycle of care. These prompts ensure that services such as health assessments and follow up items are booked in where relevant.

An inner regional service uses prompts for cycle of care in CIS for following up clients and a requirements tab in the CIS which indicates which MBS claim might be appropriate for the activity a patient has been booked in for. These are cross checked against PRODA to see what has already been claimed for the client before they arrive.

- **Community incentives (Operational):** Mature services often implement community incentives to ensure that their patients are aware of health assessments and follow up items. A common example is “Deadly Choices”, which incentivises Aboriginal and Torres Strait Islander people, through the provision of limited edition shirts, to access their local health service and complete an annual health assessment.

Some services also incentivise clients to return for follow up services through the provision of gift cards or, other, “Deadly Choices” incentives.

A service with less than 1,501 clients provides gift vouchers as an incentive to promote the uptake of health assessments within the community. The service identified challenges in recalling client for follow up care and is planning to adjust the gift voucher incentives to require one follow up service completion prior to the incentive being given.

Challenges to a mature approach to service delivery and workforce model for MBS claiming

During the site visits, services reported a number of common challenges to developing a cohesive and sustainable service delivery and workforce model to support MBS claiming for eligible activity.

- **Process for planned care (Operational):** Less mature services did not have processes in place to support a cycle of planned care. These services did not set, or had low adherence to, expectations for their medical workforce to recommend follow up care following a health assessment or to refer to allied health care.

They were also less likely to have a process in place to support planned follow up care. Even in circumstances where this activity was delivered, which was the case for most services in this sample, low levels of understanding amongst the Aboriginal Health Worker and Practitioner and Practice Nurse workforce in regard to eligibility and the appropriate processes lead to under claiming for follow up care.

- **Workforce stability and GP employment model (Operational):** Services with an unstable workforce are more likely to struggle with referrals for follow on and allied health item numbers. Where services employ locum GPs there continues to be a reticence to refer for follow up services as the GP is required to retain responsibility for the health, safety and clinical outcomes of the patient.

Less mature services were more likely to be reliant on GP locums and to have greater instability in their workforce. Combined this has the effect of inhibiting the ability for the service to clearly define the preferred cycle of planned care and to embed this understanding across all staff groups.

For example, a service located in outer regional Australia identified workforce capacity as the main barrier to increases in the services provided to clients, and therefore increasing the eligible activity which can be claimed. The service is planning to employ additional GPs and other clinicians over the next 12 months to improve capacity to deliver services.

Services with experience with both a permanent and locum medical workforce report poorer claiming outcomes with visiting clinicians. This may be partly due to the s19(2) direction which allows Medicare benefits to be payable for services provided by salaried medical practitioners only. Similarly, a small number of services in the sample that had a history of using partial MBS reimbursement employment models indicated these employment models could be helpful for incentivising MBS claiming of eligible activity.

A service with between 3,001-4,500 clients is experiencing site capacity constraints which is impacting the service delivery and preventing the service from expanding their workforce. The service has also experienced turnover amongst the Aboriginal health workers and practitioners which has significantly impacted on familiarity and confidence using the follow up item numbers within the service.

An inner regional service introduced MBS claims as part of the GP employment model, to incentivise MBS claiming for eligible activity. The service has experienced an increase in MBS claiming for eligible activity following this.

- **Highly transient population (Environmental):** Services with a transient population may have their health care needs met by multiple services, this can create challenges for delivering long term care management. A number of services with a transient population identified that other service providers undertake opportunistic health assessments when a patient visits an alternative provider, because of the level of available reimbursement under the MBS, without taking accountability for ongoing care management. This also created an additional administrative burden for services to check whether health assessments and/or other activities have been provided to their clients by another service.

If services struggle to deliver planned care to their clients, it creates flow on difficulties to claim MBS reimbursements for a high proportion of the activity that the service delivers in following up or reviewing that client. For example, if a client receives a health assessment at another service and it is claimed by that service then this precludes future claiming of follow up activity by the regular service.

The transience of clients is a challenge for services in a range of circumstances – it is not limited to services of a particular size or degree of remoteness. Transient clients can also be those that move between mainstream and non-mainstream services.

- **Degree of remoteness (Environmental):** Services located in remote areas are less likely to have a stable and diverse workforce, making claiming for follow up and allied health item numbers challenging.

Some services in remote areas struggle to recruit and retain staff. However, this activity could not identify a correlation between the maturity of claiming practices and the degree of remoteness. The sample of services for this project did include remote services that have had a fairly permanent workforce and have a mature approach to claiming largely due to a strong organisational culture and a long term role for reviewing MBS claims and educating staff on an ongoing basis.

Allied health service delivery

The workforce model for the delivery of allied health varied across services. The range of different models included:

- Direct employment of allied health practitioners by the service;
- An arrangement for individual practitioners to provide a visiting service;
- An arrangement with state funded hospital and health services to provide outreach;
- An arrangement with other block funded services to provide a visiting service; and
- A contract with another provider to deliver a range of allied health activity.

Few services employed and delivered the full range of allied health activity required by their clients directly. For most services, for reasons of scale, it was inefficient to select this model. In practice, whilst the other workforce

models ensure access to allied health services for clients, they create limited opportunities for services to improve their claiming for referred allied health activity. This is because only salaried workforce models support claiming under the s19 (2) exemption. These other models do not support claiming as they are either funded by another source or are not being delivered consistent with the exemption.

A service with between 3,001-4,500 clients indicated that very few MBS claims for allied health services were made at the service. The service believes that though these services are delivered on site, they are funded under a state grant meaning that no MBS claims are submitted for the service.

Common recommendations

Based on the observations made regarding the maturity of MBS claiming among the sample of 15 services visited as part of this project, it is clear that there is an opportunity for improving MBS claiming among this sample of services and increasing MBS reimbursements. The opportunities for improving MBS claiming related to service delivery and workforce model include the following:

Table 22. Recommendations in service delivery and workforce model

Number	Recommendations
G1.1	Ensure clear and consistent communication to all staff (including administration and locum staff) about the expected cycle of care for the service and how associated MBS items align with the cycle of care.
G1.2	Where possible, ensure that Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners are fully utilised within the cycle of care to support a model of care that best meets your community needs.
G1.3	Continue to investigate increasing the number of Aboriginal and Torres Strait Islander Health Practitioners within the service, to increase the services provided to the community and increase the eligible activity which the service can claim from the MBS.
G1.4	Investigate how to increase MBS claiming available for the service where allied health clinicians that deliver services at the clinic currently do not make MBS claims on behalf of their service.
G1.5	Ensure all eligible staff have a Medicare provider number for each of your service sites.

4.4. Recommendations for MBS claiming improvement

This assessment found that most services effectively claim for activity delivered by GPs. However, whilst most services deliver follow up care to their patients as part of their comprehensive model of care there is opportunity to improve claiming for this activity. The opportunity to improve claiming for referred allied health activity is more limited as a result of workforce model employed by most services.

These findings are reflected in the targets each service set for their own improvement. The individual reports provided to each participating service provide recommendations to support the achievement of these targets. The common recommendations across services are set out in each section above.

This section sets out additional recommendations which:

- Target barriers to effective claiming across the sector; or
- Address additional support and education required to lift the maturity of all services.

These recommendations are considered to be preparatory to improving the maturity of services and the sector as a whole and recognise that some services will require additional support. Other services face significant operational and environmental barriers, including highly transient populations and a lack of a medical workforce, to achieving a more mature approach to MBS claiming.

For this reason, the potential to improve MBS claiming across the sector should be sensitive to the variability in maturity as well as factors, including number of clients and degree of remoteness, which outside the control of services.

Table 23. Recommendations for MBS claiming improvement

Number	Recommendations
E2	Systems and processes
E2.1	Consider opportunities to pool specialist MBS support for education and training along with review and audit of claiming for small services.
E2.2	Build on the Medicare Liaison Officer and Business Development Officer model to increase access to and improve the consistency, quality and cultural appropriateness of advice to services.
E2.3	Consider whether the s19 (2) guidance in relation to allied health services requires amendment or clarification to reflect workforce models commonly used across the sector.
E2.4	Continue to develop and provide written guidance to services on the workflow to support effective claiming for items specific to providing care to Aboriginal and Torres Strait Islander clients tailored to each provider type. Consider appropriate channels for distribution.

Number	Recommendations
E2.5	Provide written guidance on eligibility to claim with a particular focus on Aboriginal Health Worker and Aboriginal and Torres Strait Islander Health Practitioner roles. Consider appropriate channels for distribution.
E2.6	Provide clarity on the most appropriate resource for services to check eligibility criteria and claiming rules.
E2.7	Develop and implement education resources for GPs working within the sector on the purpose of and the process to support health assessment follow up.
E2.8	Develop and implement a program of training, supported by available DHS education resources, for GPs working within the sector on the purpose of and the process to support health assessment follow up.
E2.9	Develop templates for GP use, appropriate to each CIS, to support follow up care and referral to allied health services following a health assessment.
E2.10	Develop and implement a program of training for Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners on MBS and effective claiming.
F2	Leadership and organisational culture
F2.1	Support services to share better practice approaches to MBS claiming across the sector.
F2.2	Facilitate a discussion across the sector on the role of MBS reimbursement in supporting sustainable service delivery.
F2.3	Provide services with access to data to benchmark their claiming performance against peers.
F2.4	Consider the use of MBS data in CQI frameworks and tools to support a greater understanding of service effectiveness in delivering planned care.
F2.5	Provide services with access to training resources for MBS claiming as well as provide advice on better practices for professional development across all staff groups (e.g. ongoing education, periodic training opportunities).
G2	Service delivery and workforce model
G2.1	Provide guidance to services on the accreditation requirements for Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners.
G2.2	Support services to identify appropriate education and training providers in their area.

Number	Recommendations
G2.3	Investigate the potential for a 'syndicate purchase' for remote services in order to create the critical mass to bring a trainer to the area (rather than send trainees away from community).

Appendix A. Consolidated areas for data quality improvement

A consolidated list of data quality improvement opportunities outlined in this report is provided below.

Appendix 1: Consolidated areas for data quality improvement

High priority areas

Priority Area	Number	Recommendations
Workflow to support accurate and consistent data input	1	Develop workflows, aligned to local service delivery models, to ensure that all relevant activity is captured in the CIS.
	2	Embed workflows across all staff groups through a program of induction, training, ongoing support and compliance monitoring.
	3	Develop patient pathways and workflows to support health assessment follow up and referred allied health services to improve service delivery and to optimise revenue.
Program of induction, training and ongoing monitoring	4	Develop a program of induction and training to support data quality with a focus on effective use of CIS, workflows for data input, MBS claiming and CQI.
Dedicated resources with a focus on data quality and continuous quality improvement	5	Build capacity within services to drive data quality and CQI efforts.
Leadership commitment to data quality	6	Establish a mechanism for identifying and sharing better practice leadership approaches to evidence based practice within the sector.
	7	Engage sector leadership, particularly through NACCHO and HS DAG, in setting future key performance indicators. This would support the ongoing commitment of the leadership through ensuring that indicators are informed by the deep understanding of their communities and are relevant to measuring the impact of the services in meeting need.
Data embedded in continuous quality improvement cycle	8	Document and share better practice examples of CQI models and projects which have successfully improved data quality and / or performance.

Priority Area	Number	Recommendations
	9	Support implementation of the NACCHO CQI Framework, and provide tools to support local CQI efforts.
	10	Develop reports, using consistent data that allow services to understand performance in the context of national trajectories and in comparison with other services. [Complete]
	11	Create opportunities to share areas of challenge and better practice across services.
Alignment of the CIS with the model of care	12	Support a regular program of training on the effective use of CIS' to support consistent and accurate data input and reporting for all service activity.
	13	Ensure that CIS commonly used in the sector are able to capture the range of activity delivered by services to support their model of care and enable accurate reporting.
	14	Establish a forum that allows services to work together to inform development and enhancements of CIS at a sector level.

Further recommendations

Data management

Number	Recommendations
A1	Information sharing
A1.1	Develop a platform (e.g. an online marketplace), whereby services can share better practice, policies, templates and tools with other services within the sector, and where services can express where further support is required.
A1.2 (HP)	Create opportunities to share areas of challenge and better practice across services.
A2	Workflows
A2.1 (HP)	Develop workflows, aligned to local service delivery models, to ensure that all relevant activity is captured in the CIS.
A2.2 (HP)	Embed workflows across all staff groups through a program of induction, training, ongoing support and compliance monitoring.

Number	Recommendations
A2.3	Make the mapping documents accessible through a centralised knowledge point, and promote their use to the sector, to improve understanding of the appropriate workflows for accurate data input.
A3	CQI process
A3.1 (HP)	Establish a mechanism for identifying and sharing better practice leadership approaches to evidence based practice within the sector.
A3.2 (HP)	Document and share better practice examples of CQI models and projects which have successfully improved data quality and / or performance.
A3.3 (HP)	Support implementation of the NACCHO CQI Framework, and provide tools to support local CQI efforts.
A3.4	Embed a regular structured CQI process, involving all staff, with a focus on the quality of data input and the use of data to drive continuous improvement in service delivery.
A4	Dedicated resources
A4.1 (HP)	Build capacity within services to drive data quality and CQI efforts.
A5	Induction and training
A5.1 (HP)	Develop a program of induction and training to support data quality with a focus on effective use of CIS, workflows for data input, MBS claiming and CQI.
A5.2	Provide induction, training and ongoing support to sustain a high quality of data management.

Clinical Information System

Number	Recommendations
B1	Information sharing
B1.1 (HP)	Support a regular program of training on the effective use of CIS' to support consistent and accurate data input and reporting for all service activity.
B1.2 (HP)	Ensure that CIS commonly used in the sector are able to capture the range of activity delivered by services to support their model of care and enable accurate reporting.
B1.3 (HP)	Establish a forum that allows services to work together to inform development and enhancements of CIS at a sector level.

Number	Recommendations
B1.4	Facilitate vendor-specific user forums to share areas of challenge and better practice across services, including enhancements undertaken to the system and collaboration on seeking changes that are a common requirement across vendor sites.
B1.5	Develop more targeted user manuals and training materials (e.g. webinars) that specifically address the reporting processes for the sector and to raise awareness of configuration impact.
B2	Configuration process
B2.1	<p>Support the development of best practice guidance on CIS configuration. This should include:</p> <ul style="list-style-type: none"> • Clear criteria for determining if a configuration is required (e.g. due to unique requirements arising from the model of care in the practice). • A process for development and assessment of the configuration, which would include an impact assessment on reporting. • An implementation and change management / training process for staff so that the configuration is used consistently and accurately. <p>Guidance should also outline processes for regularly reviewing (and potentially removing) redundant configurations e.g. templates, clinical codes etc.</p>
B3	Training
B3.1	<p>Embed CIS training as a mandatory component of the induction process and restrict access to the system until this has been completed.</p> <p>Establish a regular program of training, supported by annual assessment, to ensure staff maintain appropriate familiarity and are across any new functions implemented since their last assessment.</p>
B4	CIS version upgrades
B4.1	Upgrade the CIS reporting tool before each reporting period, and as soon as practicably possible upgrade the CIS to the latest version available that is compatible with accurate reporting.

Episodes of Care and Client Contacts

Number	Recommendations
C1	Definitions

Number	Recommendations
C1.1	Ensure that staff understand the definition of important terms that relate to OSR (e.g. EoC, CC and clients) and link this to the importance of data quality and reporting clinical activity.
C2	Workflows
C2.1	Ensure workflows to support real time capture of all CC and EoC activity, with a particular focus on transport, SEWB and certain allied health activity.
C3	Training
C3.1	Document the service's OSR reporting approach to ensure roles, responsibilities and processes are clearly defined. This should include a description of approaches to data extraction, review, approval, submission and addressing exception reports.
C3.2	Ensure that OSR reporting can be completed as far as possible by direct load from the CIS, and that all relevant data is systematically recorded in the CIS. This will reduce the need for manual data recording and reporting based on data being entered into separate databases.

National Key Performance Indicators data quality

Number	Recommendations
D1	Workflows
D1.1 (HP)	Develop patient pathways and workflows to support health assessment follow up and referred allied health services to improve service delivery and to optimise revenue.
D2	CQI process
D2.1 (HP)	Engage sector leadership, particularly through NACCHO and HS DAG, in setting future key performance indicators. This would support the ongoing commitment of the leadership through ensuring that indicators are informed by the deep understanding of their communities and are relevant to measuring the impact of the services in meeting need.
D2.2	Ensure approval of nKPI data is supported by a process of review which involves relevant clinical team members (prior to approval of submission into the Health Data Portal).
D2.3	Monitor and act on nKPI data as part of a regular structured CQI process, involving all staff.
D2.4	Undertake a CQI project with a particular focus improving the consistent recording of diagnosis by the GP workforce.
D3	Induction and training

Number	Recommendations
D3.1	Develop and implement a program of training to GPs, Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners on the purpose of and the process to support health assessment follow up and allied health follow up.
D4	Reporting
D4.1 (HP)	Develop reports, using consistent data that allow services to understand performance in the context of national trajectories and in comparison with other services. [Complete]
D5	Clinical terminologies
D5.1	Ensure use of consistent clinical terminologies in relation to pathology tests.

Appendix B. Consolidated areas for MBS claiming improvement

A consolidated list of MBS claiming improvement opportunities outlined in this report is provided below.

Appendix 2: Consolidated areas for MBS claiming improvement

Systems and processes

Number	Recommendations
E1.1	Consider developing an MBS claiming support tool to guide clinicians on eligible MBS item numbers and the referral pathways to allied health and other support services. Consider developing a process to review and update the MBS claiming support tool on a regular basis.
E1.2	Investigate and implement methods for more advanced MBS claiming analytics to build on your existing reporting practices. This may include analysis of how well claiming practices align with your practice population's health needs, workforce capacity, and the level of alignment between related MBS item numbers (e.g. health assessments and follow up items; GP management plans and follow up items; GP mental health plans and follow up items).
E1.3	Review MBS data periodically and assess whether the volume and type of MBS claims aligns with service expectations of eligible activity.
E1.4	Resolve accreditation and eligibility concerns preventing 10987 claiming by service staff.
E1.5	Document the MBS claiming process and how this supports the services' model of care. Ensure all relevant staff are aware of the 10987 and 81300 follow up items and are familiar with the process and expectations relating to these services. This can be supported with revisions to the model of care and workflow as well as staff education and performance monitoring.
E1.6	Support services to improve the clarity of their processes and to establish standardised workflows (e.g. service may be provided with examples of efficient claiming workflows for their CIS).

Leadership and organisational culture

Number	Recommendations
F1.1	Ensure that all staff understand the importance of MBS claiming and the workflow required to process MBS claiming for eligible activity.

Number	Recommendations
F1.2	Consider introducing clinic level stretch targets for MBS reimbursements, aligned to the cycle of care, to encourage responsibility and ownership for data quality and MBS reimbursements across all staff groups.
F1.3	Provide induction and ongoing education for staff who are eligible to claim MBS reimbursements so that there is a consistent understanding of what constitutes eligible activity in the service's cycle of care and how to appropriately claim MBS funding.
F1.4	Identify strategies to support clinical staff in actively promoting follow up services to clients who have received a health assessment and are not in a chronic disease management cycle of care (i.e. clients who have a GP management plan).
F1.5	Consider investigating and applying workforce incentive models, this may assist in increasing the number of health assessments and associated follow up items claimed.
F1.6	Consider presenting data relating to MBS claims and reimbursements back to service staff as part of regular clinic meetings (e.g. monthly or quarterly assessment of progress against MBS targets).

Service delivery and workforce model

Number	Recommendations
G1.1	Ensure clear and consistent communication to all staff (including administration and locum staff) about the expected cycle of care for the service and how associated MBS items align with the cycle of care.
G1.2	Where possible, ensure that Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners are fully utilised within the cycle of care to support a model of care that best meets your community needs.
G1.3	Continue to investigate increasing the number of Aboriginal and Torres Strait Islander Health Practitioners within the service, to increase the services provided to the community and increase the eligible activity which the service can claim from the MBS.
G1.4	Investigate how to increase MBS claiming available for the service where allied health clinicians that deliver services at the clinic currently do not make MBS claims on behalf of their service.
G1.5	Ensure all eligible staff have a Medicare provider number for each of your service sites.

Considerations for providing support to services to appropriately claim Medicare entitlements

Number	Recommendations
E2	Systems and processes
E2.1	Consider opportunities to pool specialist MBS support for education and training along with review and audit of claiming for small services.
E2.2	Build on the Medicare Liaison Officer and Business Development Officer model to increase access to and improve the consistency, quality and cultural appropriateness of advice to services.
E2.3	Consider whether the s19 (2) guidance in relation to allied health services requires amendment or clarification to reflect workforce models commonly used across the sector.
E2.4	Continue to develop and provide written guidance to services on the workflow to support effective claiming for items specific to providing care to Aboriginal and Torres Strait Islander clients tailored to each provider type. Consider appropriate channels for distribution.
E2.5	Provide written guidance on eligibility to claim with a particular focus on Aboriginal Health Worker and Aboriginal and Torres Strait Islander Health Practitioner roles. Consider appropriate channels for distribution.
E2.6	Provide clarity on the most appropriate resource for services to check eligibility criteria and claiming rules.
E2.7	Develop and implement education resources for GPs working within the sector on the purpose of and the process to support health assessment follow up.
E2.8	Develop and implement a program of training, supported by available DHS education resources, for GPs working within the sector on the purpose of and the process to support health assessment follow up.
E2.9	Develop templates for GP use, appropriate to each CIS, to support follow up care and referral to allied health services following a health assessment.
E2.10	Develop and implement a program of training for Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners on MBS and effective claiming.
F2	Leadership and organisational culture
F2.1	Support services to share better practice approaches to MBS claiming across the sector.
F2.2	Facilitate a discussion across the sector on the role of MBS reimbursement in supporting sustainable service delivery.

Number	Recommendations
F2.3	Provide services with access to data to benchmark their claiming performance against peers.
F2.4	Consider the use of MBS data in CQI frameworks and tools to support a greater understanding of service effectiveness in delivering planned care.
F2.5	Provide services with access to training resources for MBS claiming as well as provide advice on better practices for professional development across all staff groups (e.g. ongoing education, periodic training opportunities).
G2	Service delivery and workforce model
G2.1	Provide guidance to services on the accreditation requirements for Aboriginal Health Workers and Aboriginal and Torres Strait Islander Health Practitioners.
G2.2	Support services to identify appropriate education and training providers in their area.
G2.3	Investigate the potential for a 'syndicate purchase' for remote services in order to create the critical mass to bring a trainer to the area (rather than send trainees away from community).

Appendix C. Assessment Tool mandatory questions

Appendix 3: Mandatory questions in the Data Quality Assessment Tool for each area of focus

Topic	Number	Mandatory question	Element
Episodes of Care and Client Contacts	1	Is there a person/role responsible for the data provided in the Online Services Report?	People
	2	Is the data in the Episodes of Care and Client Contact captured from your CIS?	Process
	3	If it is a manual process is there a document that outlines this process?	Documentation
	4	Would all eligible patients be included in the OSR?	Process
	5	Would all eligible Episodes of Care be included in the OSR?	Process
	6	Do you believe that the most recent OSR episode count accurately reflect the activity within your service?	System
nKPI data quality	7	Is there a person/role responsible for the data provided in the nKPI report?	People
	8	Is there a process for clearance and release for the data provided in the nKPI report?	Process
	9	Are all patients with diabetes in your community captured in your CIS?	Process
	10	Are all the services that patients with diabetes receive captured within your CIS?	Process
	11	Are all patients with CVD in your community captured in your CIS?	Process
	12	Are all the services that patients with CVD receive captured within your CIS?	Process
	13	Would all the following services be captured in your CIS? - Health assessments - Immunisations - Blood pressure tests - HbA1c tests - eGFR tests	Process
	14	Is there a process for recording a health assessment?	Process
	15	Does a clinician (doctor, practice nurse or Aboriginal Health Worker) enter details of flu immunisations for clients aged 50 and over into the CIS?	People
	16	Is there a process for entering a flu immunisation into the CIS?	Process
	17	Does a clinician (doctor, practice nurse or Aboriginal Health Worker) enter whether a patient has a chronic disease?	People

Topic	Number	Mandatory question	Element
	18	Does a clinician (doctor, practice nurse or Aboriginal Health Worker) enter details of a blood pressure test into the CIS?	Process
	19	Is there a process for entering a blood pressure test into the CIS?	Process
	20	Is there a manual/documentation that guides data entry for the items related to these nKPIs?	Documentation
	21	Is training provided to guide data entry for the items related to these nKPIs?	Process
	22	In relation to nKPI activity is the relevant MBS number details captured in the CIS?	Process
Data management	23	Do you have a data governance framework or policies and procedures regarding how the quality of your data is managed (i.e. from input to output)?	Documentation
	24	Do you have tools to support people in carrying out the procedures above?	Process
	25	Are there processes in place at the organisation to monitor non-compliance with policies?	Process
	26	Is there a mechanism to ensure that the policies and procedures are updated as the reporting requirements change?	Process
	27	Are staff provided with information and education on the data governance OR policy and procedures?	People
Clinical Information System	28	Is your CIS version the latest version available? Please provide the version details of the CIS in use.	Process
	29	Do you normally upgrade to a new version as soon as available?	Process
	30	Does someone provide application support (including managing installation/version updates)?	Process
	31	If configurations have been made, have any relevant custom fields been mapped to fields used for nKPI and OSR calculations?	Process
	32	Is there supporting documentation for CIS users?	Documentation
	33	Are users required to undergo formal training prior to gaining access to the CIS?	People
	34	When new functionality is released/configurations put in place are these formally communicated to staff and are they trained in any new functionality (if applicable)?	People
	35	Do you have backup processes for data collection when there is loss of connectivity/power and affects use of the CIS?	Process
	36	If data is re-entered once the system connectivity is restored, does a clinician (doctor, practice nurse or Aboriginal Health Worker) enter the data?	Process

Topic	Number	Mandatory question	Element
	37	Does a clinician (doctor, practice nurse or Aboriginal Health Worker) enter patient appointment details into the CIS?	People
	38	Does a clinician (doctor, practice nurse or Aboriginal Health Worker) enter the clinical information on the patient into the CIS?	People
	39	Is clinical information entered in real-time (i.e. during appointment)?	Process
	40	Did you receive training on the CIS when you commenced at the clinic?	People

Source: KPMG

Appendix D. Detailed summary of assessment results

D.1 Overall rating results

Appendix 4: Overall maturity assessment ratings by jurisdiction

Jurisdiction	Awareness / Repeatable	Managed	Measured / Optimised	Total
NSW / ACT	8	6	5	19
VIC / TAS	7	4	3	14
QLD	6	7	3	16
SA / NT	4	3	5	12
WA	5	3	5	13
Total	30	23	21	74

Source: KPMG

SA / NT services had the highest proportion of services with a Measured / Optimised overall rating.

Appendix 5: Overall maturity assessment ratings by remoteness level

Remoteness	Awareness / Repeatable	Managed	Measured / Optimised	Total
Major Cities of Australia	3	2	5	10
Inner Regional Australia	11	8	6	25
Outer Regional Australia	8	6	4	18
Remote Australia	2	4	3	9
Very Remote Australia	6	3	3	12
Total	30	23	21	74

Source: KPMG

Services located in Major Cities of Australia had the highest proportion (50 per cent) of services with a Measured / Optimised overall rating.

Appendix 6: Overall maturity assessment ratings by size of service

Size	Awareness / Repeatable	Managed	Measured / Optimised	Total
Less than 1,501 clients	12	7	3	22
Between 1,501-3,000 clients	7	8	5	20
Between 3,001-4,500 clients	5	3	8	16
More than 4,500 clients	6	5	5	16
Total	30	23	21	74

Source: KPMG

Services with less than 1,501 clients had the least amount of services with a Measured / Optimised overall rating. Services between 3,001 and 4,500 clients had the highest proportion (50 per cent) of services with a Measured / Optimised overall rating.

Appendix 7: Overall maturity assessment ratings by CIS

CIS	Awareness / Repeatable	Managed	Measured / Optimised	Total
Best Practice	2	2	1	5
Communicare	19	9	17	45
MedicalDirector	8	8	1	17
MMEx	1	4	2	7
Total	30	23	21	74

Source: KPMG

Communicare, which the majority of services used (45 of 74), had 17 of the 21 services that had a Measured / Optimised overall rating. MedicalDirector had the highest proportion of services with an Awareness / Repeatable overall rating.

Appendix 8: Overall maturity assessment ratings by EoC to client ratio range

Ratio range	Awareness / Repeatable	Managed	Measured / Optimised	Total
Below ratio range (less than 5)	5	2	1	8
Within range (between 5 and 15)	21	19	20	60
Above ratio range (greater than 15)	3	1	0	4
Not reported	1	1	0	2
Total	30	23	21	74

Source: KPMG

Of the 21 services that had a high rating (Measured / Optimised), 20 had ratios within the accepted EoC to client ratio range.

D.2 Data management rating results

Appendix 9: Data management ratings by jurisdiction

Jurisdiction	Awareness / Repeatable	Managed	Measured / Optimised	Total
NSW / ACT	11	6	2	19
VIC / TAS	5	6	3	14
QLD	7	7	2	16
SA / NT	5	2	5	12
WA	5	6	2	13
Total	33	27	14	74

Source: KPMG

SA / NT services had the highest proportion (42 per cent) of services with a Measured / Optimised rating for data management.

Appendix 10: Data management ratings by remoteness

Remoteness	Awareness / Repeatable	Managed	Measured / Optimised	Total
Major Cities of Australia	5	4	1	10
Inner Regional Australia	11	8	6	25
Outer Regional Australia	8	8	2	18
Remote Australia	3	3	3	9
Very Remote Australia	6	4	2	12
Total	33	27	14	74

Source: KPMG

Both Major Cities of Australia (5 of 10) and Very Remote Australia (6 of 12) had the highest proportion (50 per cent) of services with Awareness / Repeatable rating for data management.

Appendix 11: Data management ratings by size of service

Size	Awareness / Repeatable	Managed	Measured / Optimised	Total
Less than 1,501 clients	12	6	4	22
Between 1,501-3,000 clients	9	9	2	20
Between 3,001-4,500 clients	5	6	5	16
More than 4,500 clients	7	6	3	16
Total	33	27	14	74

Source: KPMG

Services with between 3,001 and 4,500 clients had the highest proportion (31 per cent) of services with a Measured / Optimised rating for data management.

Appendix 12: Data management ratings by CIS

CIS	Awareness / Repeatable	Managed	Measured / Optimised	Total
Best Practice	2	2	1	5
Communicare	21	12	12	45
MedicalDirector	9	7	1	17
MMEx	1	6	0	7
Total	33	27	14	74

Source: KPMG

Communicare, which the majority of services used (45 of 74), had 12 of the 14 services that had a Measured / Optimised rating for data management.

Appendix 13: Data management ratings by EoC to client ratio range

Ratio range	Awareness / Repeatable	Managed	Measured / Optimised	Total
Below ratio range (less than 5)	4	4	0	8
Within range (between 5 and 15)	25	22	13	60
Above ratio range (greater than 15)	3	0	1	4
Not reported	1	1	0	2
Total	33	27	14	74

Source: KPMG

Of the 14 services that had a Measured / Optimised rating for data management, 13 had ratios within the accepted EoC to client ratio range.

D.3 CIS rating results

Appendix 14: CIS ratings by jurisdiction

Jurisdiction	Awareness / Repeatable	Managed	Measured / Optimised	Total
NSW / ACT	8	3	8	19
VIC / TAS	4	6	4	14
QLD	5	6	5	16
SA / NT	3	4	5	12
WA	3	4	6	13
Total	23	23	28	74

Source: KPMG

WA had the highest proportion (46 per cent) of services with a Measured / Optimised rating for CIS, followed closely by SA / NT and NSW / ACT, at 42 per cent of services.

Appendix 15: CIS ratings by remoteness

Remoteness	Awareness / Repeatable	Managed	Measured / Optimised	Total
Major Cities of Australia	3	1	6	10
Inner Regional Australia	8	7	10	25
Outer Regional Australia	7	6	5	18
Remote Australia	2	3	4	9
Very Remote Australia	3	6	3	12
Total	23	23	28	74

Source: KPMG

Major Cities of Australia (6 of 10) had the highest number and proportion (60 per cent) of services with Measured / Optimised rating for CIS.

Appendix 16: CIS ratings by size of service

Size	Awareness / Repeatable	Managed	Measured / Optimised	Total
Less than 1,501 clients	8	10	4	22
Between 1,501-3,000 clients	6	4	10	20
Between 3,001-4,500 clients	4	5	7	16
More than 4,500 clients	5	4	7	16
Total	23	23	28	74

Source: KPMG

Only 4 of 22 services with less than 1,501 clients had a Measured / Optimised rating for CIS. Services with between 1,501 and 3,000 clients had the highest proportion (50 per cent) of services with a Measured / Optimised rating for CIS.

Appendix 17: CIS ratings by CIS

CIS	Awareness / Repeatable	Managed	Measured / Optimised	Total
Best Practice	1	2	2	5
Communicare	15	12	18	45
MedicalDirector	6	7	4	17
MMEx	1	2	4	7
Total	23	23	28	74

Source: KPMG

MMEx had the highest proportion (57 per cent) of services with a Measured / Optimised rating for CIS. Communicare, which the majority of services used (45 of 74), had 18 of the 28 services that had a Measured / Optimised rating for CIS.

Appendix 18: CIS ratings by EoC to client ratio range

Ratio range	Awareness / Repeatable	Managed	Measured / Optimised	Total
Below ratio range (less than 5)	3	4	1	8
Within range (between 5 and 15)	18	16	26	60
Above ratio range (greater than 15)	1	2	1	4
Not reported	1	1	0	2
Total	23	23	28	74

Source: KPMG

Of the 28 services that had a high rating (Measured / Optimised), 26 had ratios within the accepted EoC to client ratio range.

D.4 OSR rating results

Appendix 19: OSR ratings by jurisdiction

Jurisdiction	Awareness / Repeatable	Managed	Measured / Optimised	Total
NSW / ACT	8	6	5	19
VIC / TAS	9	2	3	14
QLD	7	6	3	16
SA / NT	4	3	5	12
WA	4	2	7	13
Total	32	19	23	74

Source: KPMG

WA had the highest proportion (54 per cent) of services with a Measured / Optimised rating for OSR.

Appendix 20: OSR ratings by remoteness

Remoteness	Awareness / Repeatable	Managed	Measured / Optimised	Total
Major Cities of Australia	3	2	5	10
Inner Regional Australia	12	8	5	25
Outer Regional Australia	8	5	5	18
Remote Australia	2	3	4	9
Very Remote Australia	7	1	4	12
Total	32	19	23	74

Source: KPMG

Major Cities of Australia (5 of 10) had the highest number and proportion (50 per cent) of services with a Measured / Optimised rating for OSR.

Appendix 21: OSR ratings by size of service

Size	Awareness / Repeatable	Managed	Measured / Optimised	Total
Less than 1,501 clients	14	5	3	22
Between 1,501-3,000 clients	8	7	5	20
Between 3,001-4,500 clients	4	3	9	16
More than 4,500 clients	6	4	6	16
Total	32	19	23	74

Source: KPMG

Services with between 3,001 and 4,500 clients had the highest proportion (56 per cent) of services with a Measured / Optimised rating for OSR. Services with less than 1,501 clients had the highest proportion (64 per cent) of services with an Awareness / Repeatable rating for OSR.

Appendix 22: OSR ratings by CIS

CIS	Awareness / Repeatable	Managed	Measured / Optimised	Total
Best Practice	3	2	0	5
Communicare	18	10	17	45
MedicalDirector	10	5	2	17
MMEx	1	2	4	7
Total	32	19	23	74

Source: KPMG

Communicare, which the majority of services used (45 of 74), had 17 of the 23 services that had a Measured / Optimised rating for OSR. MedicalDirector and Best Practice had the highest proportion (59 per cent and 60 per cent, respectively) of services with an Awareness / Repeatable rating for OSR.

Appendix 23: OSR ratings by EoC to client ratio range

Ratio range	Awareness / Repeatable	Managed	Measured / Optimised	Total
Below ratio range (less than 5)	4	3	1	8
Within range (between 5 and 15)	23	16	21	60
Above ratio range (greater 15)	4	0	0	4
Not reported	1	0	1	2
Total	32	19	23	74

Source: KPMG

Of the 23 services that had a Measured / Optimised rating for OSR, 21 had ratios within the accepted EoC to client ratio range.

D.5 nKPI rating results

Appendix 24: nKPI ratings by jurisdiction

Jurisdiction	Awareness / Repeatable	Managed	Measured / Optimised	Total
NSW / ACT	7	6	6	19
VIC / TAS	7	3	4	14
QLD	5	4	7	16
SA / NT	4	2	6	12
WA	5	2	6	13
Total	28	17	29	74

Source: KPMG

SA / NT services had the highest proportion (50%) of services with a Measured / Optimised rating for nKPI.

Appendix 25: nKPI ratings by remoteness level

Remoteness	Awareness / Repeatable	Managed	Measured / Optimised	Total
Major Cities of Australia	2	4	4	10
Inner Regional Australia	11	5	9	25
Outer Regional Australia	8	3	7	18
Remote Australia	2	2	5	9
Very Remote Australia	5	3	4	12
Total	28	17	29	74

Source: KPMG

Remote Australia had the highest proportion (56 per cent) of services with a Measured / Optimised rating for nKPI data quality.

Appendix 26: nKPI ratings by size of service

Size	Awareness / Repeatable	Managed	Measured / Optimised	Total
Less than 1,501 clients	12	4	6	22
Between 1,501-3,000 clients	7	6	7	20
Between 3,001-4,500 clients	5	1	10	16
More than 4,500 clients	4	6	6	16
Total	28	17	29	74

Source: KPMG

Services with between 3,001 and 4,500 clients had the highest number and proportion (63 per cent) of services with a Measured / Optimised approach to nKPI data quality.

Appendix 27: nKPI ratings by CIS

CIS	Awareness / Repeatable	Managed	Measured / Optimised	Total
Best Practice	3	1	1	5
Communicare	17	8	20	45
MedicalDirector	7	5	5	17
MMEx	1	3	3	7
Total	28	17	29	74

Source: KPMG

Communicare, which the majority of services used (45 of 74), had 20 of the 29 services that had a Measured / Optimised rating for nKPI data quality. Best Practice had the highest proportion (60 per cent) of services with an Awareness / Repeatable rating for nKPI data quality.

Appendix 28: nKPI ratings by EoC to client ratio range

Ratio range	Awareness / Repeatable	Managed	Measured / Optimised	Total
Below ratio range (less than 5)	4	2	2	8
Within range (between 5 and 15)	20	15	25	60
Above ratio range (greater than 15)	3	0	1	4
Not reported	1	0	1	2
Total	28	17	29	74

Source: KPMG

Of the 29 services that had a Measured / Optimised rating for nKPI data quality, 25 had ratios within the accepted EoC to client ratio range.

Appendix E. Detailed case studies

E.1 Better practice DQASP Stage 1 & 2 case studies

During site visits areas of better practice in relation to data management were identified and documented. The case studies below highlight these areas of better practice.

DQASP Stage 1 case study – Danila Dilba Health Service, NT

The service

Danila Dilba Health Service (DDHS) is an Aboriginal Community Controlled Health Service based in Darwin (Aboriginal and Torres Strait Islander population in the Greater Darwin Region of 11,960)³⁵. The service was established in 1991 by Aboriginal community members who wanted a health service that was controlled by and provided services to the local Aboriginal communities. DDHS is strongly committed to changing health outcomes of the local community by improving access to services and working with the local community and clients to improve health.

The service's strategic priorities for 2017-20 are:

- Improving health and wellbeing across the life course of Indigenous people within the region.
- Building organisational capacity and strength to ensure sustainable and effective service delivery.
- Strengthening partnerships and relationships with the community and other stakeholders.
- Achieve continuous improvement and integration of services through continuous quality improvement activities and evidence-based service design³⁶.

DDHS has six clinics across the region, with plans for an additional two clinics³⁷. Services offered through these clinics include:

- Primary health care.
- Specialist and allied health services.
- Health promotion.
- Care coordination for clients with complex health needs.
- Social and emotional wellbeing services.
- Drug and alcohol services.

³⁵ Australian Bureau of Statistics. 2016 [Census QuickStats](#). Indigenous Areas. Accessed June 2018.

³⁶ Danila Dilba Health Service. 2017. [Annual Report 2016-2017](#). Accessed June 2018.

³⁷ Ibid.

- Outreach services.

Operating context

DDHS is Darwin's only Aboriginal Community Controlled Health Service and operates within a framework of comprehensive primary health care and community services, primarily funded through the Commonwealth Department of Health. The service has roughly 150 staff, 70 per cent of which are Indigenous (excluding GPs) and are servicing 80 per cent of the Indigenous population in the region³⁸.

DDHS has shifted the way services are designed and delivered over the past three years, bringing services closer to where clients live and taking a more holistic approach to client care.

As a result of a major review of service design in 2016, services were decentralised. Clients are now able to receive care at their local clinic from a team of primary health care generalists, supported by allied health practitioners, midwives, outreach workers, medical specialists and health education and promotion staff. The aim of this process was on integrating all clinics into a consistent delivery model, focusing on the person rather than the disease.

DDHS provides services to people in the Yilli Rreung (Greater Darwin) region of the Northern Territory. More than 13,400 local people used this service within 2016-17, an increase from the previous year with 1,467 new clients accessing the service³⁹.

While Darwin is categorised as a regional area, there are a large number of socioeconomic and behavioural factors which impact the health of the overall population⁴⁰.

Darwin's residents experience roughly 76 per cent of the burden of disease and disability compared to Indigenous Australians living throughout the rest of the Northern Territory⁴¹.

Area of better practice

Problem

Staff at all levels of the organisation must be engaged to build a culture which emphasises the importance of data in the delivery of quality care.

Solution

DDHS staff understand the importance of data and how data may be used to better respond to community needs.

Continuous Quality Improvement (CQI) activity is embedded in the design, delivery and review of all services. DDHS uses reported data to inform ongoing research and CQI projects that focuses on maximising the service delivery models to improve client outcomes across all areas of the service. Performance data is regularly

³⁸ Danila Dilba Health Service. 2017. [Annual Report 2016-2017](#). Accessed June 2018.

³⁹ Danila Dilba Health Service. 2017. [Annual Report 2016-2017](#). Accessed June 2018.

⁴⁰ Deloitte Access Economics. 2016. [Cost-benefit and funding analysis of the Danila Dilba Health Service](#). Accessed June 2018.

⁴¹ Danila Dilba Health Service. 2017. [Annual Report 2016-2017](#). Accessed June 2018.

reported to the Board, management team and staff at the clinic level via data dashboards. Performance results are available at the service and clinic level.

Staff are engaged in CQI activity across the service, with a principles based approach taken to CQI activity. This draws on the expertise of staff in providing local information when considering the impact and effectiveness of services.

To ensure a culture of continuous improvement is embedded across the service, Action Improvement Plans have been implemented. Action Improvement Plans incorporate the change cycle of 'Plan, Do, Study and Act' and are completed across services and clinics, highlighting specific areas of improvement. A variety of staff are involved in the completion of Action Improvement Plans, with monitoring and documentation completed by the nominated lead.

Enablers and success factors

Data is consistently used in audit and monitoring processes to measure the performance and impact on individual programs across the service.

A Clinical Safety and Quality Committee was established in 2016 and includes CQI Officers, GPs, Nurses and Aboriginal Health Workers. This is a majority Indigenous quorum whom meet each month to review client complaints, incident reports, policies and procedures and Improvement Action Plans.

This committee also works closely with the Board Risk and Audit Committee with a strong focus on improving service delivery.

Challenges and barriers

The service re-design of DDHS was aimed at allowing for effective and efficient service operation, while ensuring the needs of the local community continue to be met. The use of data to inform and drive this process required the relevant expertise to be developed internally, this meant that staff across DDHS required support and training to understand why data is important and how it can be used.

The needs of the local community are continually changing and ensuring that the service understands these needs has required a significant commitment to Aboriginal management within the service, as well a commitment to ensuring there is consistent messaging from DDHS's management team.

Impact

DDHS has implemented robust processes to identify areas for improvement through the use of data and actively prioritising these areas in the review and redesign of services.

The culture and practice of DDHS has been developed to support this approach and the focus on data quality. A high level of ownership and commitment to the effective capture and use of data is encouraged across all staff groups and supported by formalised processes which promote consistency and continuity.

DQASP Stage 1 case study – Goondir Health Services, QLD

Background

The Service

Goondir Aboriginal and Torres Strait Islanders Corporation for Health is an Aboriginal Community Controlled Health Service providing primary health care and related health services to Aboriginal and Torres Strait Islander communities across an area of 160,000 square kilometres from Oakey in south-east Queensland to St George in south-west Queensland⁴².

Goondir Health Services (Goondir) has clinics in Dalby, Oakey and St George, and operates a Mobile Medical Clinic that travels to other communities in the area. The service covers clients from Jandowae, Surat, Dirranbandi, Thallon, Chinchilla, Miles, Tara and their surrounding areas. The focus of the assessment was on the Dalby site (Aboriginal and Torres Strait Islander population of approximately 749⁴³).

Services provided by Goondir focus on individualised care and community engagement and prevention. As well as providing a full suite of medical services, health screening, counselling and chronic care services, the University of Queensland provides oral health care at both locations. Final year dental students provide care under the supervision of a Dentist trainer.

Goondir was the first Aboriginal Medical Service to achieve service accreditation under the QIC Health Standards in 2002⁴⁴. The service recently gained certification against ISO: 2015 (Quality Management Systems) Standards with the aim of further improving internal systems and performance.

Area of better practice

Problem

An effective data reporting system is integral to planning, delivering, monitoring and evaluating primary health care services, particular those that aim to close the gap.

Goondir recognised this and sought to develop a reporting system that provides clinicians, managers and the executive team with up-to-date data that allows for better, more timely evaluations and informed clinical and management decisions.

Solution

Goondir have developed an in-house Clinical Performance Dashboard that combines clinical data from the patient record information system, organisational data from the quality management system, data from other external resources such as QLD Health, Primary Health Networks (PHNs), ABS and financial data into one service planning and management tool. This tool is supported by their Quality Management System (LogiQC) to ensure set actions and targets are being undertaken or met respectively.

⁴² Goondir Health Services. 2018. [About Us](#). Accessed 19 June 2018.

⁴³ Australian Bureau of Statistics. 2016 [Census QuickStats](#). Indigenous Areas. Accessed 9 July 2018.

⁴⁴ Goondir Health Services. 2018. [Quality and Accreditation](#). Accessed 19 June 2018.

The Dashboard

The Dashboard operates at a number of levels, with data tailored to suit multiple audiences. The executive team and the Board have a high level overview of the performance metrics. There are additional more detailed views that managers use to plan and evaluate service delivery. Team leaders and clinicians can access the information that matters for them.

Continuous quality improvement

Goondir has embedded the use of data into their day-to-day practice and is the cultural norm as part of their continuous quality improvement strategy and framework.

Progress is tracked regularly, often daily, and communicated to staff. Staff are all aware of the goals, improvement programs and the performance of their organisation.

Enablers and success factors

- Be selective about which metrics are included in the Dashboard.
- Data must look simple, be visual and easy to understand.
- There are high levels of accountability at all levels of the organisation.
- ‘Quality is Everyone’s Business’ – driven by the executive leadership team.
- Keep the data current and looking forward for service delivery and strategic planning

Lessons learned

- Start simple and build complexity over time. The Dashboard was initially built in Excel before developing over time to use Business Objects. The only investment that was needed was the time and commitment of the staff.
- Use metrics that are meaningful to the service.
- Keep the visuals simple and avoid them being over-designed.
- The Dashboard must be linked to larger organisational objectives.
- Don’t underestimate the need to maintain the Dashboard. It’s not a one-off exercise.

Impact

The Dashboard, Quality Management System and various data sets has assisted the Executive, Management, and teams to define what is important for the service and to set goals and expectations for clinics, teams and individuals. This universal approach provides a platform for staff to interact with and analyse organisational data which has resulted in a high level of ownership and commitment from the staff.

The review of data to understand performance and inform decision making is firmly embedded into the culture of Goondir, from the executive cascading through the organisation to each individual staff member.

DQASP Stage 1 case study – South West Aboriginal Medical Service, WA

Background

The Service

South West Aboriginal Medical Service (SWAMS) is an Aboriginal Community Controlled Health Service providing primary health care and related health services to the south west region of Western Australia.

SWAMS' main clinic is located in the city of Bunbury (Aboriginal and Torres Strait Islander population of approximately 1,135⁴⁵), and also provides outreach clinics at Australind (maternal and child health), Busselton, Brunswick, Collie and Manjimup. The focus of the visit was on the Bunbury site.

The SWAMS clinical team consists of doctors, nurses, nurse practitioner, midwives, Aboriginal health workers, diabetes educator, child maternal health workers, transport drivers and others. Clinical services include general medicine, chronic disease management, mental health, perinatal care, child and family health, family planning, midwifery, sexual and reproductive health, and patient advocacy.

Area of better practice

Problem

SWAMS leadership have recognised the importance of accurately and consistently recording its clinical activities to support high quality clinical care as well as ensure that the organisation is able to collect all eligible revenue for the services it delivers. This enables SWAMS to best service the needs of its communities, including expanding on existing locations where possible. SWAMS notes that this approach is based on good organisational management rather than a response to a specific problem.

Solution

SWAMS has identified and addressed data quality across a number of areas, ensuring there is a comprehensive approach to continuous quality improvement. This includes a strong orientation program, a well resourced Health Information team, regular reporting on organisational performance to staff, the Board and community (via the Annual General Meeting), a clinical record audit program, and customisation of SWAMS' CIS, Communicare. Notably, SWAMS displayed an outstanding team and leadership culture during KPMG's visit, with management consistently demonstrating a detailed understanding of the OSR and nKPI reporting requirements.

Enablers and success factors

- In-depth orientation program that includes proactive follow up of new staff during their first month of employment.
- SWAMS's Clinic Director, Clinic Support Team Coordinator, Health Information Officer and CEO are all engaged during OSR and nKPI reporting.

⁴⁵ Australian Bureau of Statistics. 2016 [Census QuickStats](#). Indigenous Areas. Accessed June 2018.

- The Health Information team proactively manages data quality, supports service planning and quality improvement initiatives, and provides ongoing education to staff.
- All users require comprehensive training before they are provided access to the CIS. The training is also phased so that staff do not feel overwhelmed and there is a clinical and data quality audit 4-6 weeks after a staff member starts work with the service.
- Communicare customisations include the creation of tabs for each service area where commonly used clinical items and templates are located, providing easy access to appropriate clinical codes and ensuring consistent nKPI reporting.

Lessons learned

- SWAMS management team have a structured approach to monitoring performance, discussing related issues and collaboratively identifying improvement opportunities.
- The breadth of understanding across the organisation of OSR and nKPI reporting requirements, including how these relate to data entry as well as funding, has helped ensure strong commitment to data quality and the organisation's overall strategy.

Impact

SWAMS has developed a strong and united leadership group. The service performs well against six of the seven data items relating to the five nKPIs reviewed during this engagement, and has devised strategies to improve their performance going forward.

DQASP Stage 1 case study – Yerin Eleanor Duncan Aboriginal Health Centre, NSW

Background

The service

Yerin Eleanor Duncan Aboriginal Health Service (Yerin) is an Aboriginal Community Controlled Health Service located on the New South Wales Central Coast (Aboriginal and Torres Strait Islander population of 12,485)⁴⁶. It operates out of one main clinic in Wyong and one outreach clinic two days a week. The service, in operation since 1993, provides a range of medical services as well as community programs that have a strong focus on addressing physical, emotional, social, economic and cultural needs of a patient.

Operating context

As the third largest urban area in New South Wales, the Central Coast covers a network of towns including Gosford, Lakehaven, the Entrance, Tuggerah, Terrigal, Woy Woy and Wyong⁴⁷. It is also the fastest growing Indigenous community in Australia with nearly 13,000 Aboriginal and Torres Strait Islander people living on the coast⁴⁸.

⁴⁶ Australian Bureau of Statistics. 2016 [Census QuickStats](#). Indigenous Areas. Accessed July 2019.

⁴⁷ Central Coast Australia. 2018. [Local Town Guide](#). Accessed July 2018.

⁴⁸ Yerin Aboriginal Health Services Inc. [Our Community](#). Accessed July 2019.

The remoteness category for this region is RA1 - Major Cities.

Community profile

The traditional owners of the Central Coast area are the Darkinyung people. Their health needs include a high prevalence of preventable chronic diseases, such as diabetes, heart disease, respiratory disease, kidney disease and significant levels of mental health, drug dependence, domestic and family violence underpinned by intergenerational trauma. The community also has a high rate of known health risk factors, including smoking, drug and alcohol use, poor diet, obesity, poor oral health and low screening rates for cancer. Socioeconomic disadvantage, including homelessness, unemployment and insecure housing, is contributing to the poor health outcomes experience by Aboriginal people in the region.

Area of better practice

Problem

The service has a strong focus on data quality and it is also part of the existing fortnightly clinical meetings and ad-hoc data quality reviews by the Executive team. Recent growth, improvements in their reputation and reach of the service and the subsequent increase in the EoC delivered, identified a requirement to establish additional governance arrangements to exercise and maintain data quality amongst other focus areas at an organisational level.

Furthermore, the implementation of a new CIS in October 2017 provided the service with an opportunity to reinforce data quality.

Solution

Yerin recently established three governance committees for the following priority areas:

- Health Care Quality sub-committee: to implement the clinical governance policy and support the clinical governance systems to set, monitor and improve the overall performance of the service. In addition, the role of the committee is to communicate the importance of the patient experience and the need for quality management to all members of the workforce.
- Community Empowerment steering committee: to advise the Board and Chief Executive on effective consumer and community participation strategies within the Aboriginal and Torres Strait Islander Community of the NSW Central Coast.
- Financial Risk and Audit committee: to assist Yerin to understand and manage its organisational risks and support the Board in fulfilling its responsibilities for overseeing the organisation's financial reporting process, the system of internal control, the audit process and the process for monitoring compliance with relevant laws, regulations and codes.

Each of the committees meet on a quarterly basis and members include internal staff, Board members, mainstream services representatives and community members. The service has also recognised a need to focus on data quality as another priority area, and is intending to establish a separate committee for data quality governance.

Impact

Whilst the impact of having a governance committee for data quality is yet to be realised and measured, based on the outcomes achieved through other governance committees, the service believes that:

- Strong engagement from the leadership that engages the whole organisation and external representatives will deeply embed the focus on data quality across the service.
- A proactive approach to continuous quality improvement can be established.

DQASP Stage 2 case study – Ngaanyatjarra Health Service, WA/NT

Background

Ngaanyatjarra Health Service provide primary health services to the communities that live on the Ngaanyatjarra lands (located on the Western Australian side of the border), with their head office located in Alice Springs, NT. The team at Ngaanyatjarra Health Service look after 11 remote communities with seven fully staffed clinics and the other four operating under an outreach model.

Area of better practice

Problem

Ngaanyatjarra recognise the importance of creating a culture where staff at all levels of the organisation are engaged in the use data to inform and support continuous improvement in care for their community.

Solution

The team at Ngaanyatjarra Health Service have established a Clinical Governance Committee with a strong focus on data quality and reporting. They have also employed a Continuous Quality Improvement (CQI) and Performance Manager who is committed to improving the team's awareness and understanding of the importance of capturing and reporting data to better help their clients.

Performance data is regularly reported to the Board by the management team and also to staff at the clinic level via dashboards and face-to-face conversations. The CQI and Performance Manager regularly visits the lands to speak with the nurses and GPs, (and Aboriginal Health Workers/Practitioners where available), about performance results including nKPIs and state based targets, as well as CQI activities to address improvement.

Enablers and success factors

- Data is consistently used in audit and monitoring processes to measure the performance and impact on individual programs across the service.
- A Clinical Governance Committee was established.

Challenges and barriers

The team at Ngaanyatjarra Health Service have a core group of long-term clinical staff, but turnover is very high for the remainder of staff, which makes it difficult to ensure that all team members are inputting data correctly.

Impact

High staff turnover has the potential to significantly impact data quality. To counteract these impacts, the CQI and Performance Manager has implemented robust audit processes to identify gaps in performance (e.g. where items may have been entered incorrectly or vital information missed) and potential areas for improvement, including re-educating staff when necessary.

DQASP Stage 2 case study – Yura Yungi Medical Service, WA

Background

The team at Yura Yungi Medical Service (YYMS) has a strong focus on participation in local community activities and conducted community consultations to establish culturally appropriate activities. For example, they often run a mobile clinic at local events such as football carnivals, as well as running community meetings with Elders, and supporting separate mens' shed and womens' group activities.

Area of better practice

Problem

In small remote communities it is difficult to attract and retain qualified Indigenous and non-Indigenous staff members to work in the local services.

Solution

YYMS has made a conscious decision to employ many of their local Indigenous people including drivers, Aboriginal Health Workers, Aboriginal Health Practitioners and nurses. YYMS endeavour to provide their staff, both Indigenous and non-Indigenous with opportunities to progress within the service and have upgraded their staff accommodation.

Enablers and success factors

With the increase of their Indigenous workforce, the team at YYMS have been able to improve the relationship between YYMS, the local community and all other health services that are offered within Halls Creek (including the hospital and aged care services).

The service has seen an increase in their client numbers, which they attribute to improved trust and confidence in the clinic.

Challenges and barriers

Due to the remoteness of Halls Creek, there is no local training available for Health Professionals. Relevant training facilities are located in Perth, Broome or Kununurra with staff choosing to travel and participate in training for their Certificate IV in Aboriginal Health for extended periods of time (at least two weeks). With limited staff available to backfill those that are away is difficult and has caused a barrier for YYMS in upskilling their people.

Impact

With the focus on growing their Indigenous workforce, the team at YYMS now has 80%+ of the workforce made up of local Indigenous people who speak language and have connections back to the community which has had a positive impact on their clients and the local community.

E.2 Stage 1 follow up consultation case studies

The Stage 1 follow up consultation focused on understanding where services have successfully implemented the areas of improvement identified during Stage 1, challenges or barriers experienced to implementing the areas of improvement, and exploring if services experienced a change in the accuracy of their OSR and nKPI reporting. The case studies below explore the journey some services experienced since completing the Stage 1 assessment.

Stage 1 follow up consultation case study – Griffith Aboriginal Medical Service, NSW

Background

The Griffith Aboriginal Medical Service (Griffith AMS) is an Aboriginal Community Controlled Health Service which provides services to both Indigenous and non-Indigenous patients.

Improvements made to data quality

Area(s) for improvement identified during Stage 1

During Stage 1, Griffith AMS was in the process of transitioning their CIS to Communicare. The service were not confident that all data had successfully migrated to the new CIS, and staff were still learning how to effectively use Communicare. This created challenges in ensuring the accuracy of data in the CIS.

Some of the areas for improvement identified for the service during the assessment, in relation to improving the accuracy of data within the CIS, were:

- Rapidly completing the implementation of Communicare, including verification of data migration from the previous system and the resolution of bugs.
- Standardising staff training in data management at induction, and following the introduction of changes to Communicare – along with providing periodic refresher training to assist in embedding a culture of data quality throughout the organisation.
- Expanding the practice of undertaking regular and systematic audits of data quality to identify gaps in data quality and instances of non-compliance.

Actions taken to improve data quality

Since the Stage 1 assessment, the service has undertaken the following actions in relation to the above areas for improvement:

- Upgraded to the latest version of Communicare.
- Partnered with AH&MRC to conduct refresher training and induction processes for the organisation.
- Completed spot audits in the CIS, to identify areas for further improvement in data quality.
- Provided staff members with the opportunity to attend 'superuser' training for the system, which will be completed in 2019.

These actions were undertaken to improve data quality and have been implemented since the Stage 1 assessment.

Improvements made to data quality

The service believes that:

- Implementation of data audits have yielded improvements to data quality and accuracy across the service.
- Upgrading to the latest version of Communicare, along with the associated training has led to improved data entry and mapping to the correct fields for accurate data extraction.

Challenges and/or barriers experienced to improving data quality

Griffith AMS believe that if a set of standardised templates for policies and procedures were made available, the service would more easily be able to document formal data processes and frameworks.

Stage 1 follow up consultation case study – Kambu Aboriginal and Torres Strait Islander Corporation for Health, QLD

Background

Kambu Aboriginal and Torres Strait Islander Corporation for Health (Kambu Health) is an Aboriginal Community Controlled Health Service that operates in Ipswich and West Moreton region of Queensland.

Improvements made to data quality

Area(s) for improvement identified during Stage 1

During Stage 1, Kambu Health was experiencing significant growth in activity as a result of additional service offering, a number of new clients, and the commencement of a relatively new clinic. This created challenges ensuring that all activity was recorded, particularly activity associated with the Children and Family Centre.

In addition to ensuring completeness of activity data, the service also noted increased challenges around ensuring that all staff groups have an understanding of the appropriate workflows to ensure accurate data, and embedding those workflows across those staff groups.

Some of the areas for improvement identified for the service during the assessment were:

- Developing workflows to ensure that all workflows across all services can be captured in the CIS.
- Embedding workflows across all staff groups by developing a program of training, ongoing support and compliance monitoring.

- Further supporting improvements to data quality by embedding a regular structured CQI process across all sites with a focus on quality of data input, then the use of that data to drive continuous improvement.

Actions taken to improve data quality

Since the Stage 1 assessment, the service has undertaken the following actions in relation to the above areas for improvement:

- Worked closely with the Institute for Urban Indigenous Health to establish and embed workflows across all staff groups to ensure that all activity across all service lines is captured in the CIS.
- Providing staff with regular support, training and monitoring in relation to workflows to support high quality data. In addition to this support, the service is piloting eLearning modules to support data entry and use of data in a consistent manner. Staff are provided access to webinars to deliver this content.
- Increased the focus on continuous quality improvement by establishing monthly clinical governance meetings, and creating a standing agenda item on data and reporting for all senior team meetings. This has also been implemented at each clinic.

These actions were undertaken to improve data quality and have been implemented since the Stage 1 assessment.

Improvements made to data quality

The service believes that significant improvements have been made to data quality, including:

- Ensuring that all activity can be accurately recorded in the CIS; and
- Educating all staff on the importance of data quality, including the provision of regular training and support, and piloting the eLearning modules to support data entry and use of data.

Challenges and/or barriers experienced to improving data quality

Kambu Health acknowledges that aligning all staff on the value of data for their service model and in driving improvement requires significant and ongoing effort from management and leadership.

Stage 1 follow up consultation case study – Nunkuwarrin Yunti of South Australia Inc, SA

Background

Nunkuwarrin Yunti of SA Inc. (Nunkuwarrin Yunti) is an Aboriginal Community Controlled Health Service that provides multi-disciplinary team based services across four sites within the Adelaide metropolitan region of South Australia. The diverse range of services provided are designed to ensure that all traditional, rural and urban Aboriginal and Torres Strait Islander people are able to access best practice primary health care that is dedicated to improving their physical, social and emotional wellbeing, spiritual, cultural and mental health.

Improvements made to data quality

Area(s) for improvement identified during Stage 1

During Stage 1, Nunkuwarrin Yunti had well established processes in place to address data quality and were actively committed to the improvement of the capture and reporting of service data. They were in the process of developing an overarching data governance framework, to further strengthen their approach to data management.

Some of the areas for improvement identified for the service during the assessment, in relation to improving the accuracy of data within the CIS, were:

- Finalising the review and documentation of the service's existing procedures for data management, with an overarching service and data governance framework that identifies responsible parties, and ongoing data quality review activities, as well as practice processes for entering and using data in a consistent and appropriate manner.
- Continuing to develop and update user training manuals to support training of new staff and to support existing staff across the service.
- Progressing the use of the service's CQI framework to ensure a structured and ongoing approach to data analysis, and implementation and evaluation of targeted activities and projects.
- Continuing to progress towards transition to the latest version of Communicare.
- Refining and documenting existing audit processes used to evaluate the accuracy of data entry by clinical staff, and identify and address gaps in performance, and reducing reliance on manual data entry by management staff to address inconsistent/inaccurate data entry and reporting.

Actions taken to improve data quality

Since the Stage 1 assessment, the service has undertaken the following actions in relation to the above areas for improvement:

- A realignment of functions has increased the capacity of the Data Quality & Research Officer to update training materials and create program specific Communicare user guides.
- The service's CQI Framework has been updated and now includes a schedule of CQI activities and auditing events, as well as the approach to data analysis and evaluation.
- Upgrade to the latest version of Communicare is now complete.
- A process for auditing the data entry completed by all new staff has been clearly documented and implemented.

These actions were undertaken to improve data quality and have been implemented since the Stage 1 assessment (within 12 months).

Improvements made to data quality

The service believes that:

- Recommendations provided by KPMG in Stage 1 have been incorporated into service and strategic planning, with activities now forming part of a large program of work which has been endorsed by the Board. This includes providing enhanced support for Communicare users and additional training.
- Audit processes to review data entry by staff in patient records are successfully being used to identify inaccurate practices and inform the resulting coaching measures to address gaps in performance. This has also reduced reliance on manual data entry by management staff to address inconsistent/inaccurate data entry and reporting.
- The Data Quality and Research Officer has updated training materials and created program specific Communicare user guides.

Challenges and/or barriers experienced to improving data quality

Nunkuwarrin Yunti identified significant delays in upgrading to the latest version of Communicare, as well as accessing timely support from their CIS vendor.

Stage 1 follow up consultation case study – Pintupi Homelands Health Service, NT

Background

Pintupi Homelands Health Service (Pintupi) is an Aboriginal Community Controlled Health Service that provides holistic health care to the Pintupi people of Kintore, an extremely remote community with a population of approximately 450 people in the Northern Territory.

Improvements made to data quality

Area(s) for improvement identified during Stage 1

During Stage 1, Pintupi demonstrated consistent workflows to capture and report service data, with reported data being used to inform ongoing Continuous Quality Improvement (CQI) projects that focus on improving client outcomes across the service. The senior and experienced Board and management team were actively committed to further improvement, including a strong focus on succession planning to ensure that services are able to be continued long term.

Some of the areas for improvement identified for the service during the assessment, in relation to improving the accuracy of data quality were:

- Developing user training manuals to support training of new staff and to support existing staff across the service.
- Developing a CQI framework to document the structured and ongoing approach to data analysis, and implementation and evaluation of targeted activities and projects.
- Progressing with transition to the latest version of Communicare, once user testing is completed to a level that supports safe implementation and optimal functionality.

- Developing an audit process to routinely evaluate the accuracy of data entry by clinical staff, and identify and address gaps in performance, and reducing reliance on manual data entry by management staff to address inconsistent/inaccurate data entry and reporting.
- Continuing to progress work in relation to succession planning for management team to ensure a sustainable service into the future

Actions taken to improve data quality

Since the Stage 1 assessment, the service has undertaken the following actions in relation to the above areas for improvement:

- Pintupi's CQI Plan has been incorporated into the Service's Annual Plan.
- Significant work has been undertaken by Pintupi to implement succession planning strategies to manage the expected retirement of two of the management team in late 2020. This has included the engagement of an AMSANT Facilitator to support the recruitment of suitable replacements and assist in managing their transition into the service.
- The service is currently discussing the option for outsourcing the management of the IT function for the service, to maximise continuity and reduce the burden on the small senior staff.
- Upgrade to the latest version of Communicare was completed in February 2019.
- Communicare user training resources have been developed and include user guides and flowcharts which are available in each consultation room.
- A quarterly audit process has been developed and implemented to assess data accuracy.

These actions were undertaken to improve data quality and have been implemented since the Stage 1 assessment.

Improvements made to data quality

The service believes that:

- Making improved training materials available to staff is supporting the accurate use of Communicare by new and existing staff.
- Upgrading to the latest version of Communicare, along with the associated training has led to greater staff engagement and an improvement in capturing and reporting nKPI data, resulting in improvement in all five nKPIs over the past 12 months.

Challenges and/or barriers experienced to improving data quality

Pintupi believe that Investment in the service's staffing model has demonstrated a significant impact on staff retention and engagement in quality data and client outcomes. Annual budget pressures make it increasingly difficult for small remote services to deliver a quality service, due to the significant cost of providing training, flights and accommodation, to ensure the availability of staff in a remote location.

Stage 1 follow up consultation case study – Wuchopperen Health Service, QLD

Background

Wuchopperen Health Service is a Community Controlled Aboriginal Health Organisation providing comprehensive primary health care services to the Aboriginal and Torres Strait Islander people of Cairns.

Improvements made to data quality

Area(s) for improvement identified during Stage 1

During Stage 1, the service highlighted significant organisational restructuring in recent years – including the transfer of a clinic to another service, and the opening of a new clinic at Edmonton. This resulted in unforeseen challenges around submitting OSR and nKPI data for each site.

In addition to the impact that this change had on service delivery, activity, and reporting – the service began to experience challenges around producing high quality data as result of inconsistent workflows emerging, combined with little training and ongoing support.

Some of the areas for improvement identified for the service during the assessment were:

- Submitting separate OSR and nKPI reports for both sites to ensure that total activity is accurately reported.
- Improving data quality by developing workflows for consistent data entry, and ensuring this is driven by the leadership and the Clinical Reference Committee.
- Further supporting improvements to data quality by embedding workflows across all staff groups by developing a program of training, ongoing support and compliance monitoring.

Actions taken to improve data quality

Since the Stage 1 assessment, the service has undertaken the following actions in relation to the above areas for improvement:

- CQI team and Clinical Reference Committee have developed templates to guide workflows for consistent data entry.
- Invested in creating the capacity to providing staff with regular support, training and monitoring in relation to workflows to support high quality data.
- Worked with the vendor to ensure submission of separate OSR and nKPI data at a site level.

These actions were undertaken to improve data quality and have been implemented since the Stage 1 assessment.

Improvements made to data quality

The service believes that significant improvements have been made to data quality through:

- Developing and embedding workflows that has resulted in a noticeable increase in staff awareness of the importance of high quality data, and increased focus on using data more strategically to plan and deliver services; and

- Understanding service activity at a site level which has resulted in the ability to make informed decisions regarding allocation of resources across sites to meet service demand.

Challenges and/or barriers experienced to improving data quality

Wuchopperen has, and continues to encounter challenges with utilising their CIS to support the delivery of a patient centred model of care, including when upgrades to the latest versions are implemented.

E.3 MBS activity case studies

During the MBS site visits, enablers and barriers to MBS claiming for services were identified. The case studies below highlight some of the enablers and barriers services are facing to improving their MBS claiming.

MBS activity case study

Background

This is a medium size service operating in an inner regional area. The service operates with a multidisciplinary workforce that includes locum General Practitioners (GPs), Aboriginal Health Workers, Practice Nurses and Allied Health Providers. All allied health services (e.g. diabetes educator or exercise physiologist) are funded through state government or Commonwealth government grants (e.g. CheckUp or PHN funding). The service does not currently employ an Aboriginal Health Practitioner, though a number of their Aboriginal Health Workers are completing training to become Aboriginal Health Practitioners.

Area of better practice

The areas of better practice identified at this service include:

- The service has a role responsible for reviewing MBS claims, monitoring the volume and type of MBS claims, and investigating rejected claims.
- The service also has a CIS specific MBS guide, provide by their state affiliate, to support this role. This has enabled the service to identify areas for improvement with MBS claiming.

Challenges

The service has a highly transient client base, with a state funded service delivering primary health care within the same geographic area. For this reason, the service's clients often receive health assessments from other providers, for which the 715 MBS item number is claimed. This limits the ability for the service to substantially increase the proportion of their client base that they deliver and claim health assessments for.

The service was also unsure about what kind of services constituted eligible activity for follow up allied health services delivered by an Aboriginal Health Worker or Aboriginal Health Practitioner (item number 81300). This resulted in the service not claiming for eligible activity delivered in one financial year.

Opportunities for improvement

The site visit identified opportunities for the service to continue to improve their MBS claiming practices, particularly for follow up services. This included clarifying eligible activity that can be claimed through the MBS, increasing education provided to staff, and embedding the cycle of care within the service. In particular, some of the opportunities were to:

- Ensure clear and consistent communication to all staff (including administration and clinical staff) about the expected cycle of care and how associated MBS items align with the cycle of care.
- Provide training and ongoing education to staff on the expected cycle of care and associated MBS item numbers, and the process for referring and completing follow up services (item numbers 10987 and 81300).
- Develop additional supporting material to guide eligible MBS claiming which will create a consistent understanding of what constitutes eligible activity in the service's cycle of care.
- Consider introducing clinic level stretch targets for MBS reimbursements, aligned to your cycle of care and your overarching MBS revenue target, to encourage responsibility and ownership for data quality and MBS reimbursements across all staff groups.

MBS activity case study

Background

This is a medium size service operating in a remote area. The service has eight sites providing services to nine communities. This service operates with a multidisciplinary workforce that includes salaried and locum General Practitioners (GPs), Aboriginal Health Practitioners, Practice Nurses and Allied Health Providers. The service directly employs diabetes educators and dieticians with funding provided by the local Primary Healthcare Network. Other allied health services are delivered through external providers such as the local hospital. The service currently does not employ any Aboriginal Health Workers.

Area of better practice

The areas of better practice identified at this service include:

- The service has a dedicated Data Integrity Officer who is responsible for reviewing MBS claims daily, to ensure all eligible activity has been claimed and support staff in claiming accurately. Feedback is provided to staff when opportunities for improving claiming are identified.
- The service delivery model for health assessments, Chronic Disease Management Plans (CDMPs) and Team Care Arrangements (TCAs) involves having a nurse or Aboriginal and Torres Strait Islander Health Practitioner complete one template of observations and then creating a recall for the GP to complete their part of the consultation. For clinics with a visiting GP this workflow helps to ensure that these types of consultations are completed and appropriately claimed when a GP arrives at the clinic.
- The service leverages MBS claiming data to inform service delivery planning and business decisions.

- The service has a designated 'super user' at each clinic to support staff in correct use of the CIS and MBS claiming.

Challenges

The service has needed to increase its reliance on GP locums over the past year, which has impacted on claiming accuracy. This has also meant the service is required to regularly update provider numbers for the purposes of claiming. This has become increasingly difficult to do through Health Professional Online Services (HPOS) because time poor GP locums are reticent to update the provider numbers with HPOS themselves and administration staff are required to have a large amount of personal information about the GP locum in order to change the provider number on their behalf. In the latter case, GP locums are sometimes reluctant to provide this information.

Opportunities for improvement

The site visit identified opportunities for the service to continue to improve their MBS claiming practices. The opportunities for improvement are focused on ensuring the service is able to sustain a mature approach to MBS claiming through further developing all staff's understanding of how MBS claiming supports service delivery, and ensuring a sense of ownership for accurate claiming across all parts of the organisation. In particular, some of the opportunities were to:

- Ensure clear, consistent and regular communication from service leadership to all staff about how MBS reimbursements are supporting or enhancing service delivery to continue incentivising MBS claiming of all eligible activity.
- Ensure clear and consistent guidance to all staff about the workflow for creating a referral in the CIS to ensure that where clinically appropriate referrals are in place for clients receiving follow up services from Aboriginal Health Workers, Aboriginal and Torres Strait Islander Health Practitioners and / or allied health staff.
- Introduce service, clinic and individual level stretch targets for MBS reimbursements, aligned to the cycle of care, to further encourage ownership for MBS reimbursements across all staff groups and to enable staff to understand how they contribute to the Board's overall target for MBS revenue.
- Provide training and ongoing education to another staff member in reviewing MBS claiming to reduce the single resource risk of the current Data Integrity staff member so as to ensure an ongoing high level of accuracy in claiming for eligible activity.

MBS activity case study

Background

This service operates as a large network of small sized sites, spread across a very remote area. The service operates with a multidisciplinary workforce that includes General Practitioners (GPs), Aboriginal Health Practitioners, Aboriginal Health Workers, Nurses and Allied Health Providers. The majority of GPs employed are locums.

Area of better practice

The areas of better practice identified at this service for their MBS claiming include:

- The service had created a role focused on supporting effective claiming.
- The service does a weekly review of open appointments to identify further opportunities to claim for activity.
- The service had recently begun to cascade MBS targets, aligned to the model of care, to each of the sites in the network.

Challenges

This service operates in a complex environment across more than ten communities which have multiple providers. This means that the service delivery and workforce model is different at each site. The variability in the service delivery model and workforce model reduces the volume of eligible activity for which MBS can be claimed by the service. For example, a patient may see a GP from a different provider for their health assessment and thereafter any follow-up delivered by the service cannot be claimed.

An additional challenge, is that the service may not hold the definitive medical record. This makes it difficult for the service to track where a patient is up to in the cycle of care and to determine what (if any) the appropriate MBS item number might be for services delivered.

The complexity of individual health needs in each community also means that whilst the service is committed to delivering planned care as a priority, demand often requires primary clinicians to focus on urgent care.

The reliance on GP locums also creates a challenge for claiming MBS funding for all eligible follow up activity, for two key reasons: some GP locums do not sign off on health assessments; and sometimes staff do not know which GP provider number they can claim a 10987 under after a GP has left the community.

Opportunities for improvement

The site visit identified opportunities for the service to continue to improve their MBS claiming practices. These opportunities included:

- Providing clear and consistent communication to all staff (including administration and clinical staff) about the expected cycle of care and how associated MBS items align with the cycle of care.
- Ensuring that all staff, including locums and visiting staff, understand the importance of MBS claiming and the workflow required to process MBS claiming for eligible activity.
- Ensuring that staff, particularly GP locums, understand the workflow for creating a referral following a health assessment, GP Management Plan or other GP led MBS item numbers.
- Continuing with training and ongoing education for staff who are eligible to claim MBS reimbursements so that there is a consistent understanding of what constitutes eligible activity in the cycle of care and how to appropriately claim MBS funding.

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